



RADIAL CEMENT BOND LOG  
GAMMA RAY  
CCL

Company		KERR-MCGEE OIL AND GAS					
Well		HEIT ANTONE C UNIT 2					
Field		WATTERBERG					
County		WELD					
State		CO					
Location:		API # : 05-123-10846					
Permanent Datum		GL					
Log Measured From		KB 12'					
Drilling Measured From		KB					
LAT: 40.04110 LONG: -104.88150		NENW					
SEC 22 TWP 1N RGE 67W		Elevation 4985'					
Other Services		NONE					
Date		7-25-2017					
Run Number		ONE					
Depth Driller		8222'					
Depth Logger		7826'					
Bottom Logged Interval		7826'					
Top Log Interval		SURFACE					
Open Hole Size		8.75"					
Type Fluid		WATER					
Density / Viscosity		N/A					
Max. Recorded Temp.		234					
Estimated Cement Top		504'					
Time Well Ready		504'					
Time Logger on Bottom		NA					
Equipment Number		62					
Location		WINDSOR, COLORADO					
Recorded By		A. STEERMAN					
Witnessed By		JOSE					
Borehole Record		Tubing Record					
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size		Wgt/Ft		Top		Bottom
Surface String	8.63"		24#		SURFACE		864'
Prot. String							
Production String	5.5"		20#		SURFACE		8222'
Liner							

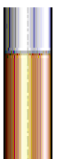
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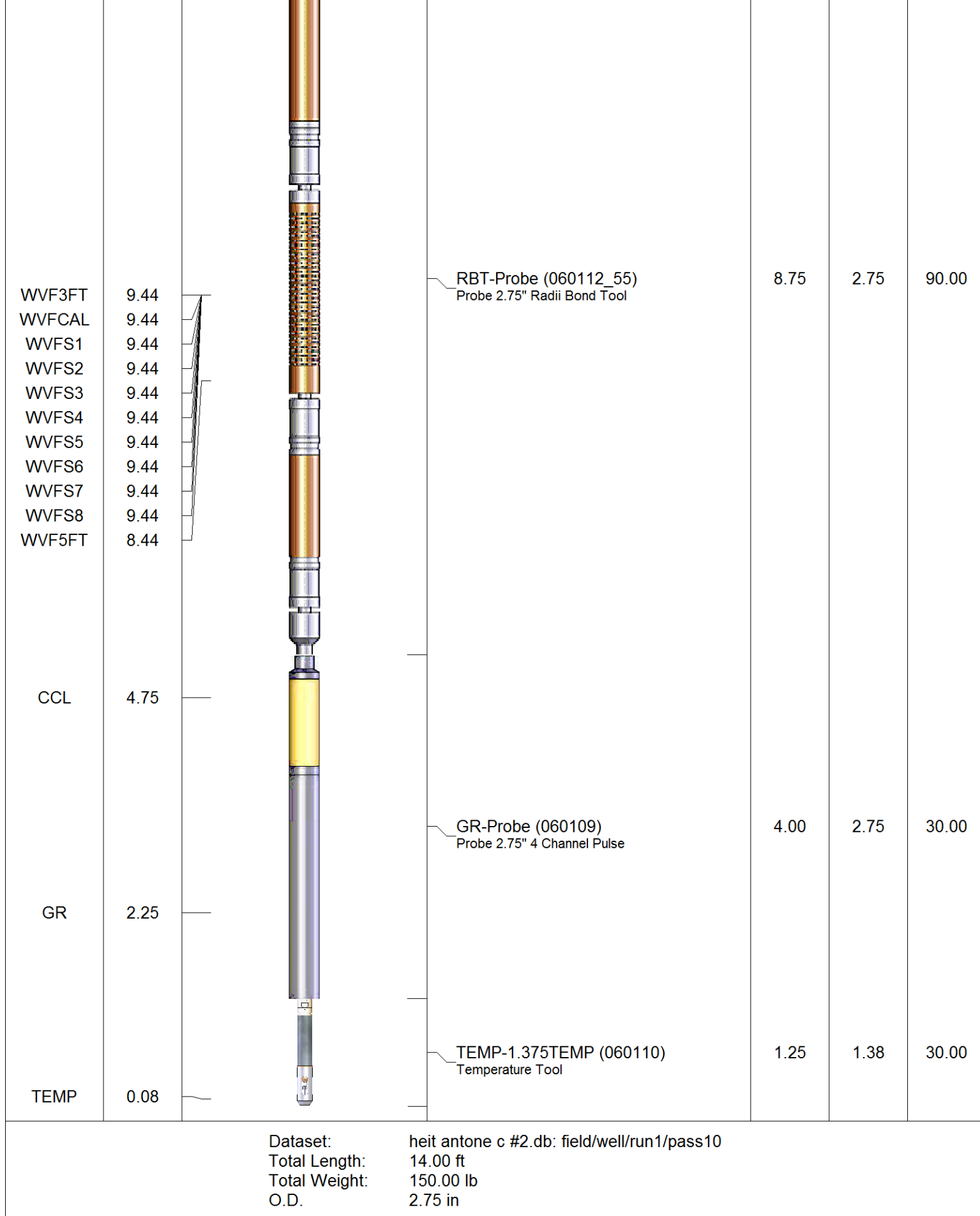
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

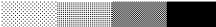

RAN CEMENT BOND LOG TO VERIFY CEMENT  
WELL LOADED BEFORE ARRIVAL

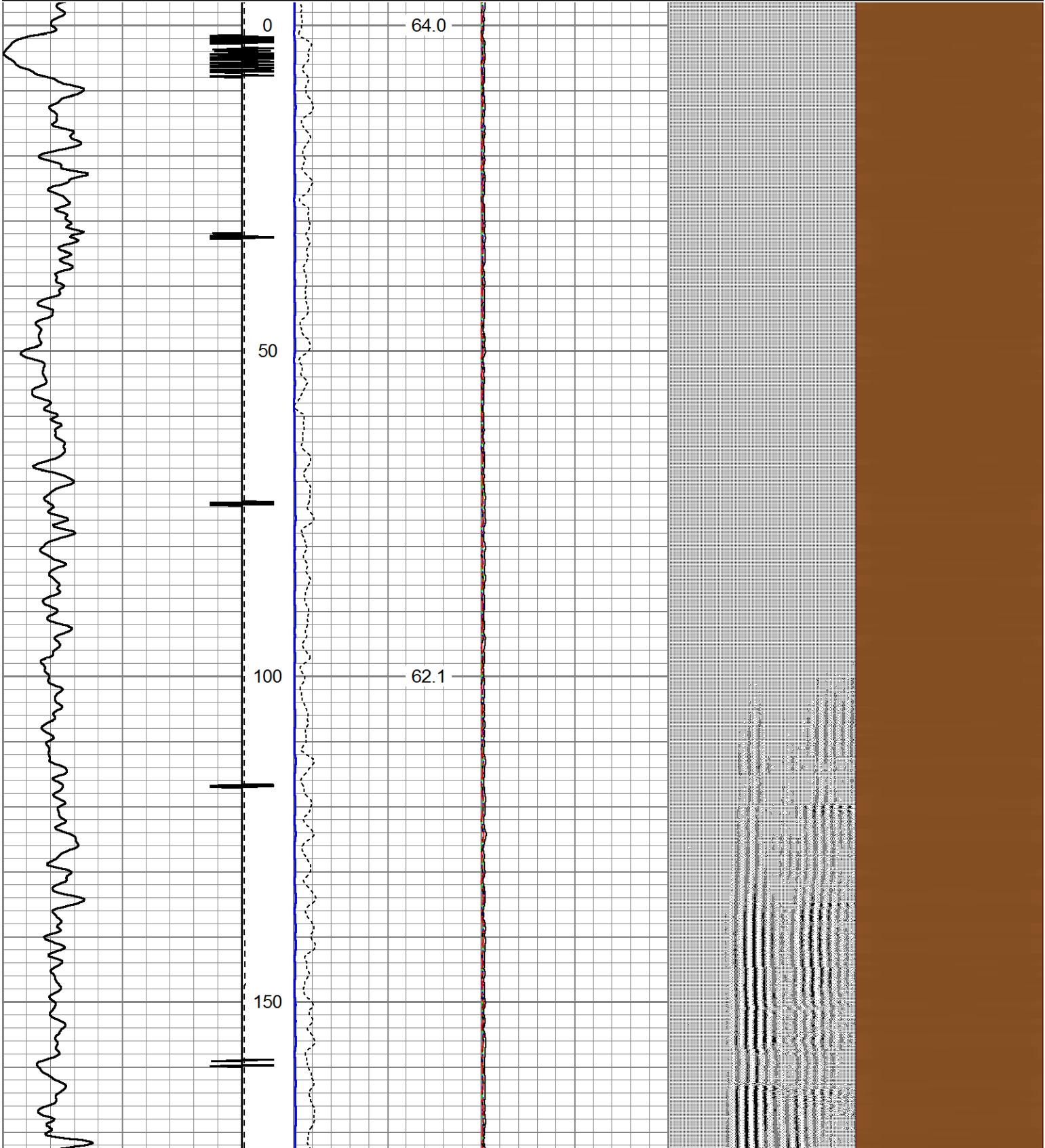
THANK YOU USING CUTTERS WIRELINE

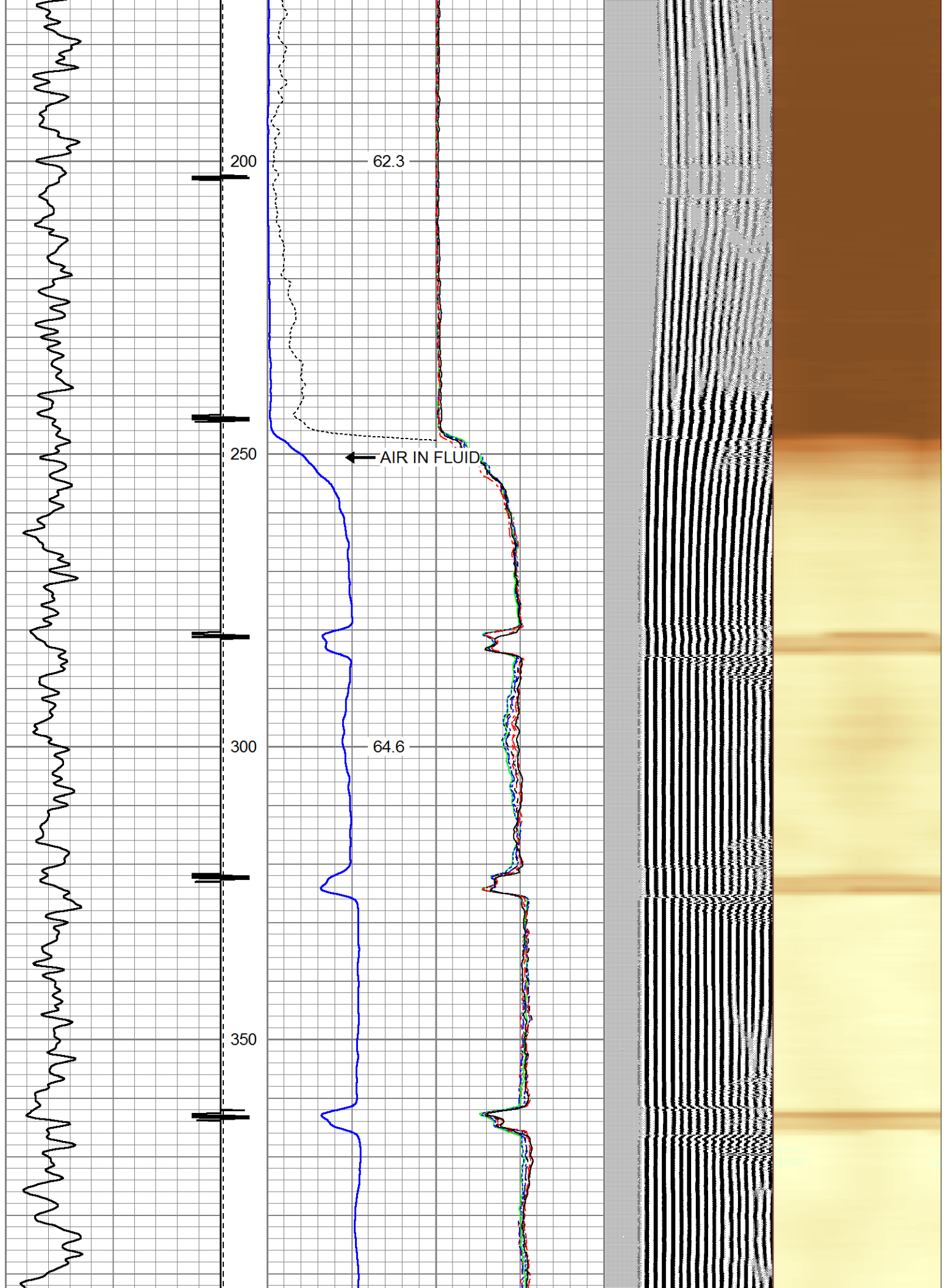
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
						



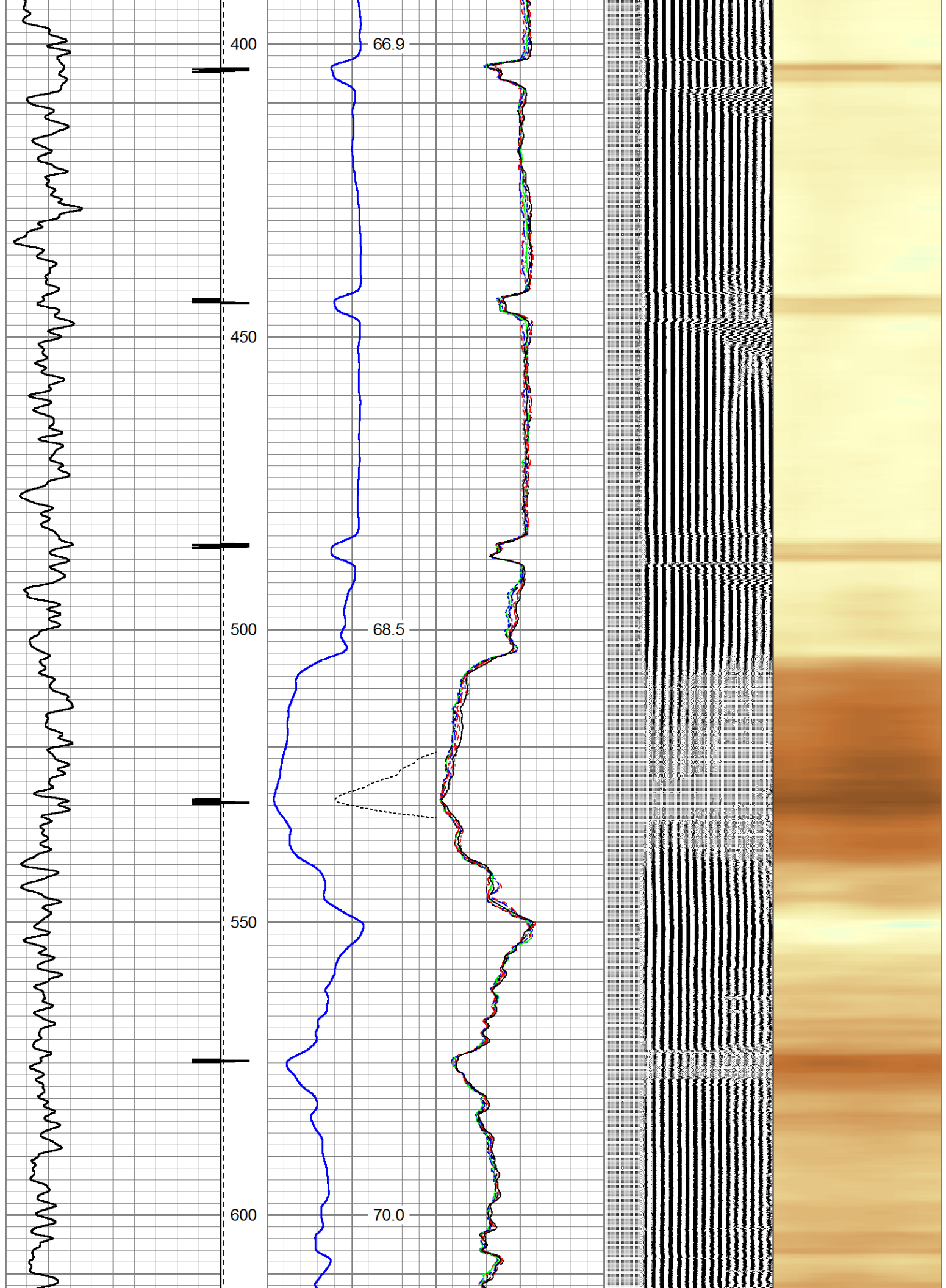
Database File: heit antone c #2.db  
 Dataset Pathname: pass10  
 Presentation Format: rbl55  
 Dataset Creation: Tue Jul 25 08:49:20 2017 by Log 7.0 B1  
 Charted by: Depth in Feet scaled 1:240

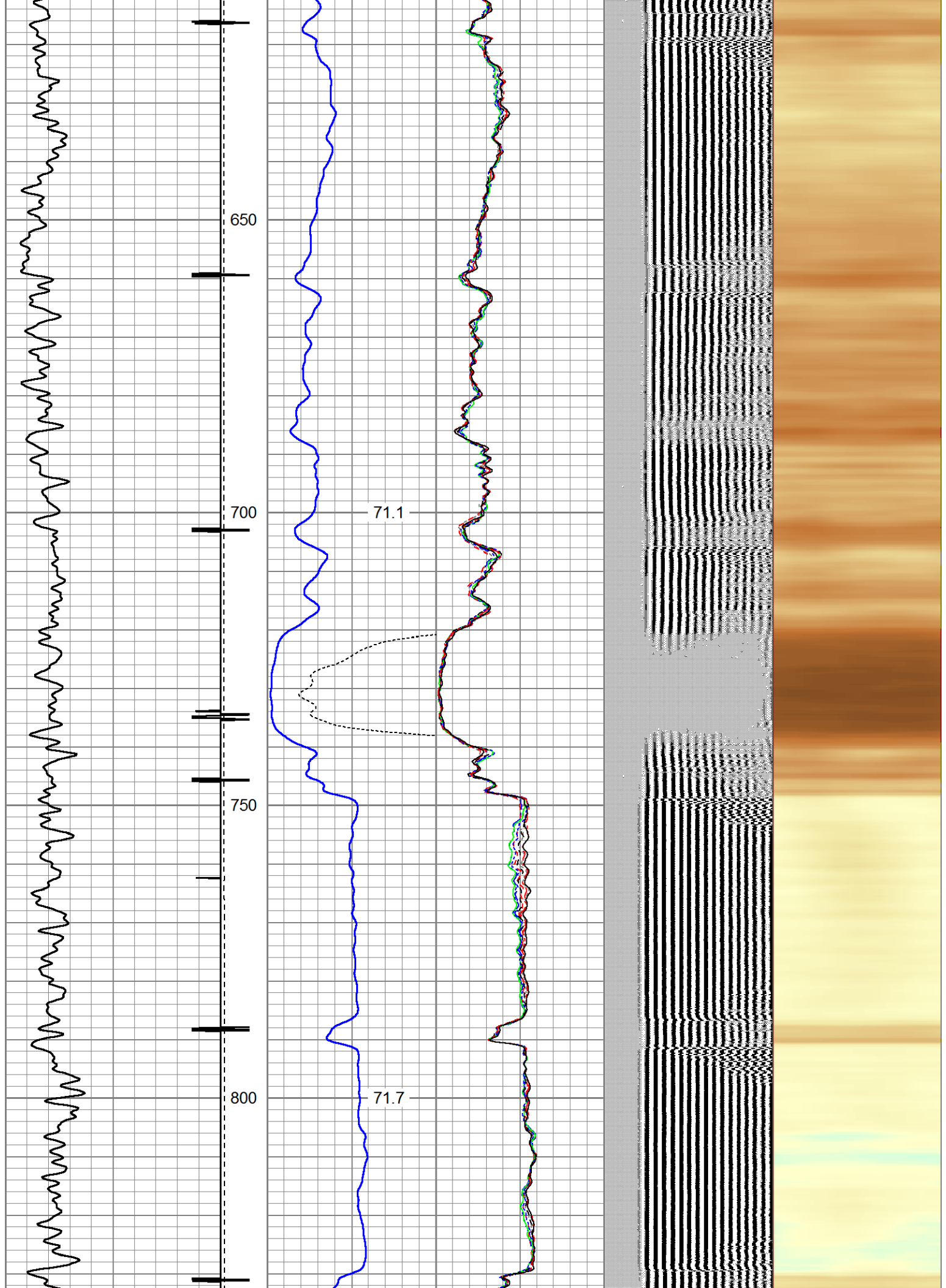
Charted by:			Depth in Feet scaled 1.240												
325	TT (usec)	225	LTEN	0	Amplitude (mV)	100	0	AMPS2	100	200	VDL	1200	Cement Map		
0	GR (GAPI)	250	(lb)		Amplified Amplitude		0	AMPS3	100			1	100		
			CCL	000	0	(mV)	10	0	AMPS4	100					
					TEMP		0	AMPS5	100						
					(degF)		0	AMPS6	100						
							0	AMPS7	100						
							0	AMPS8	100						
							0	AMPS1	100						

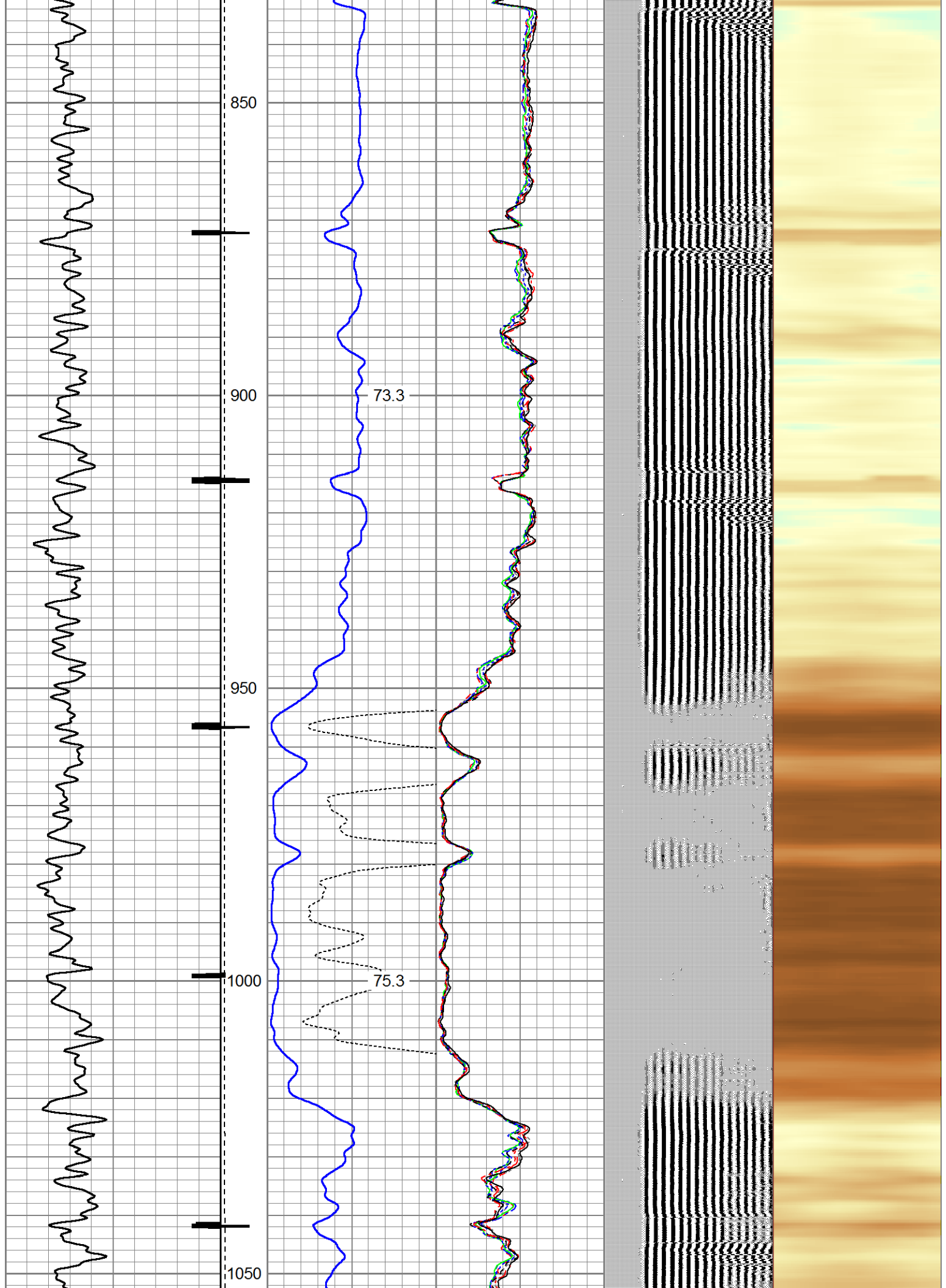




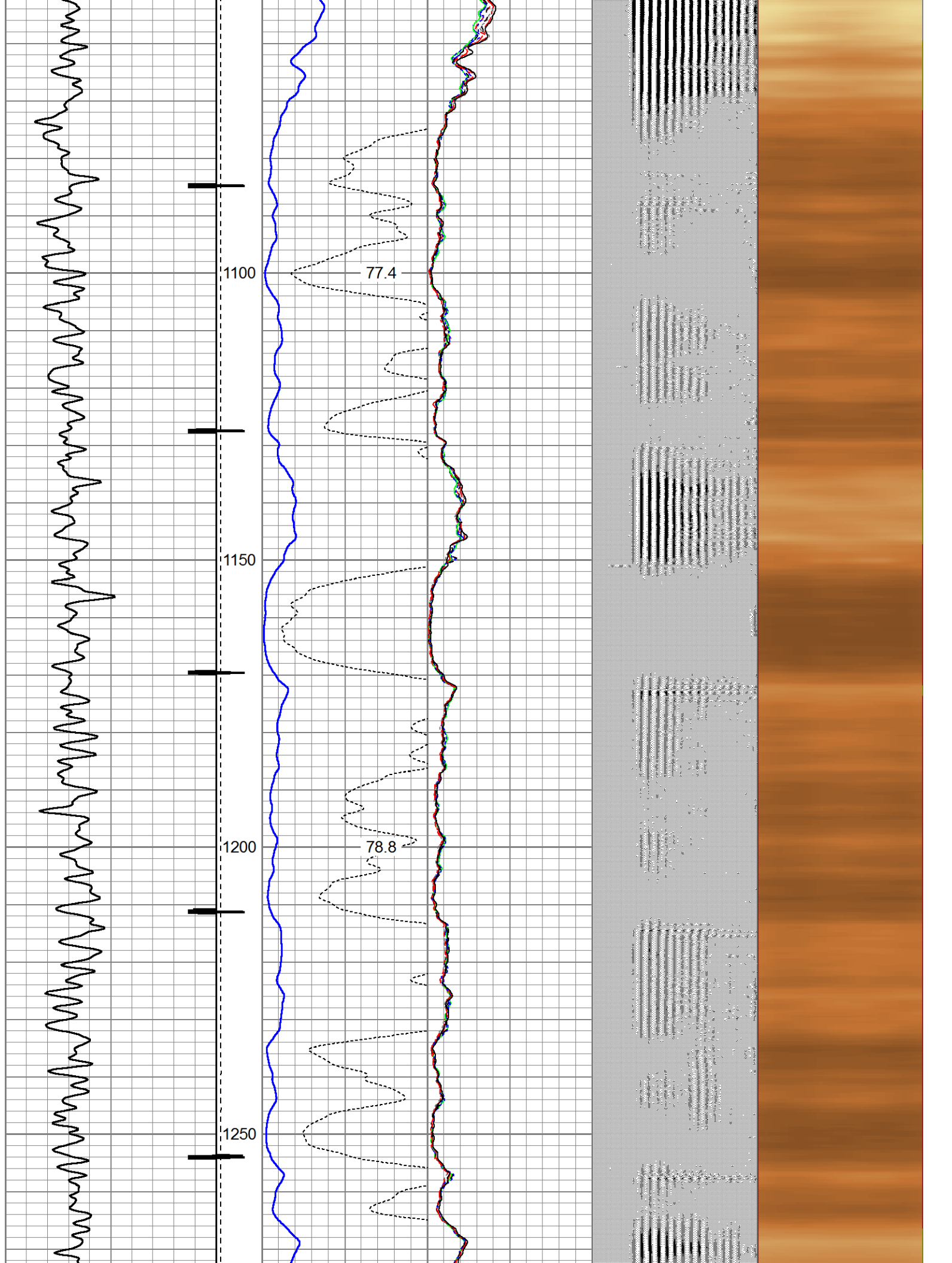


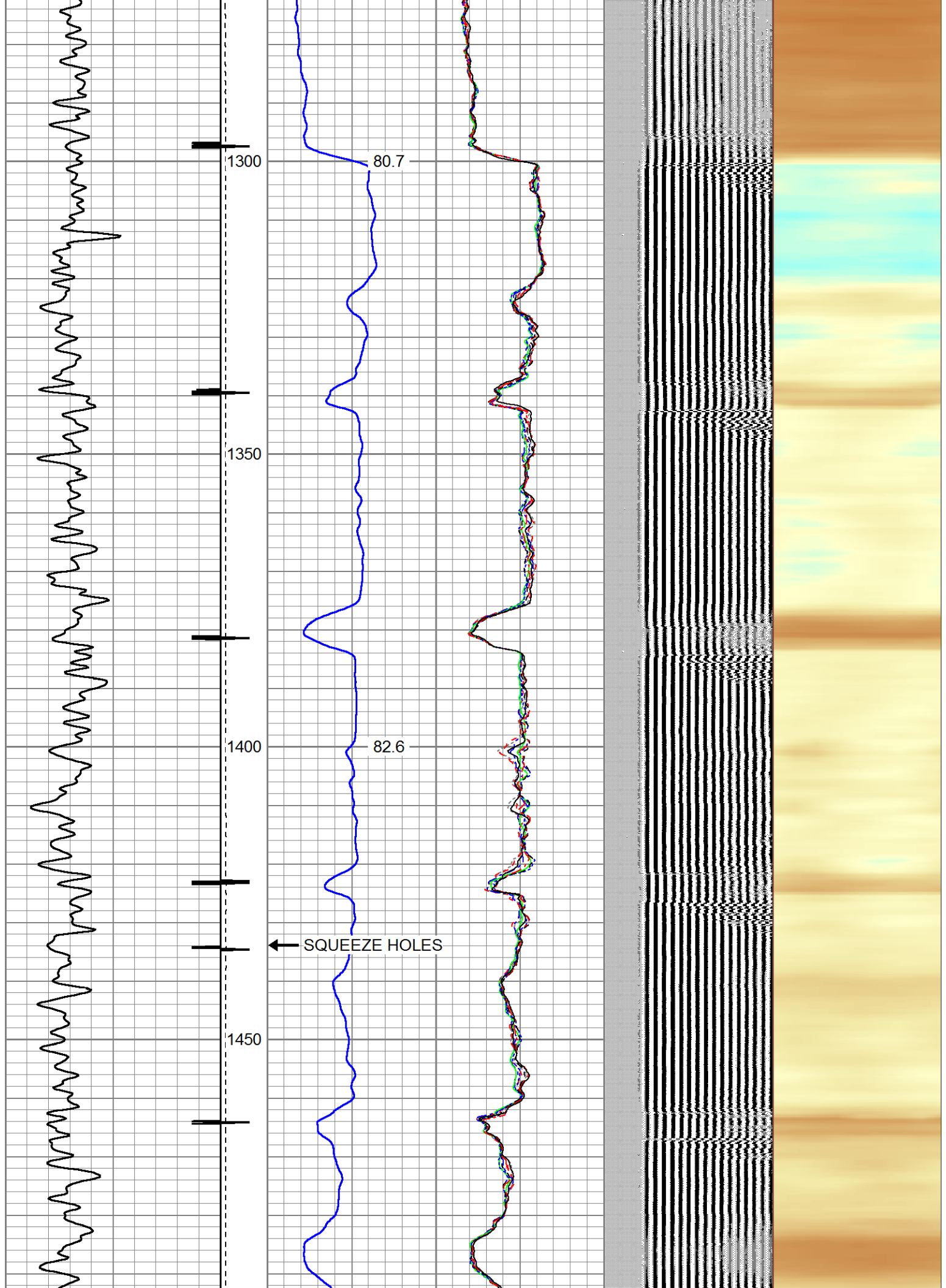




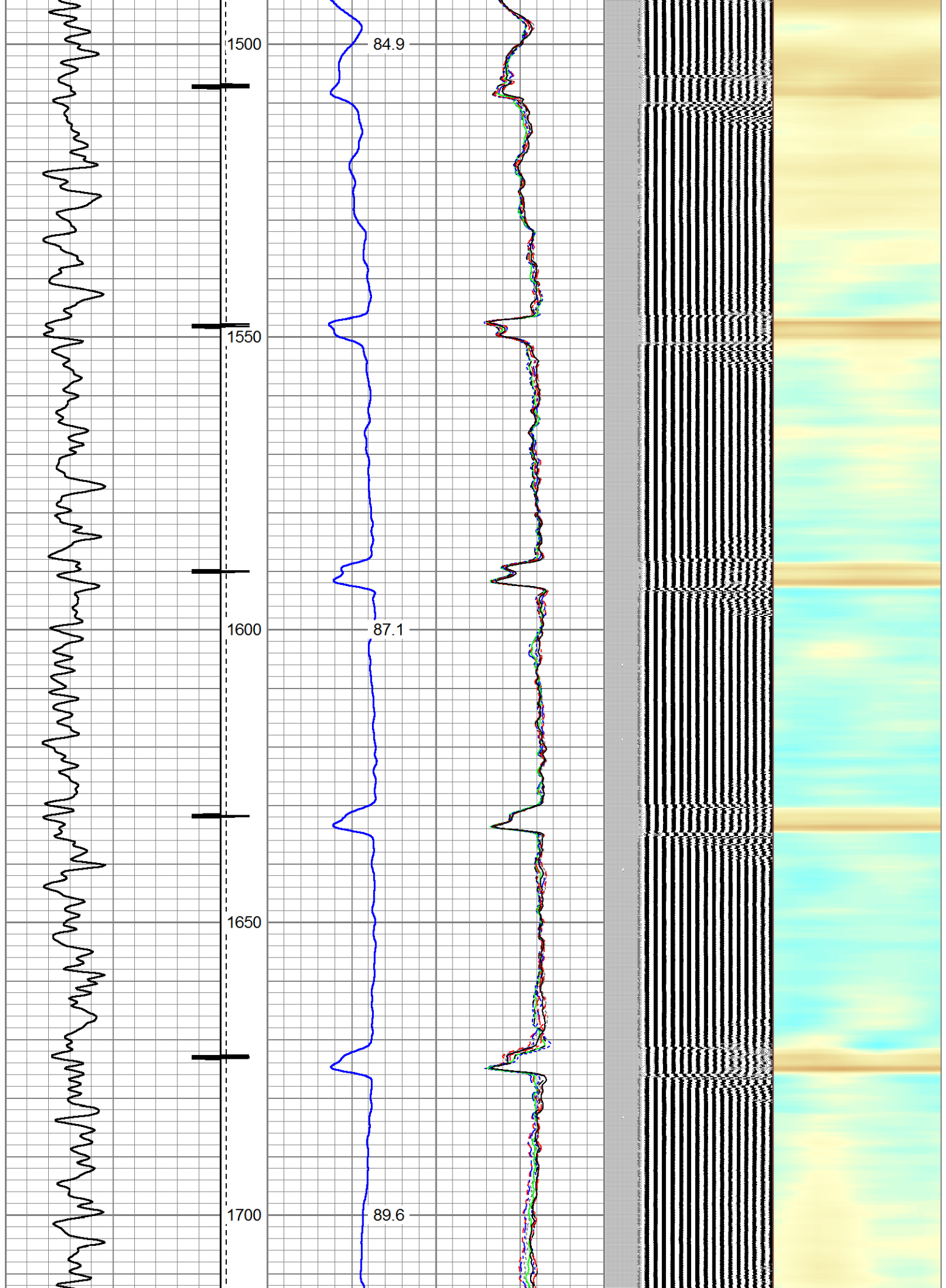


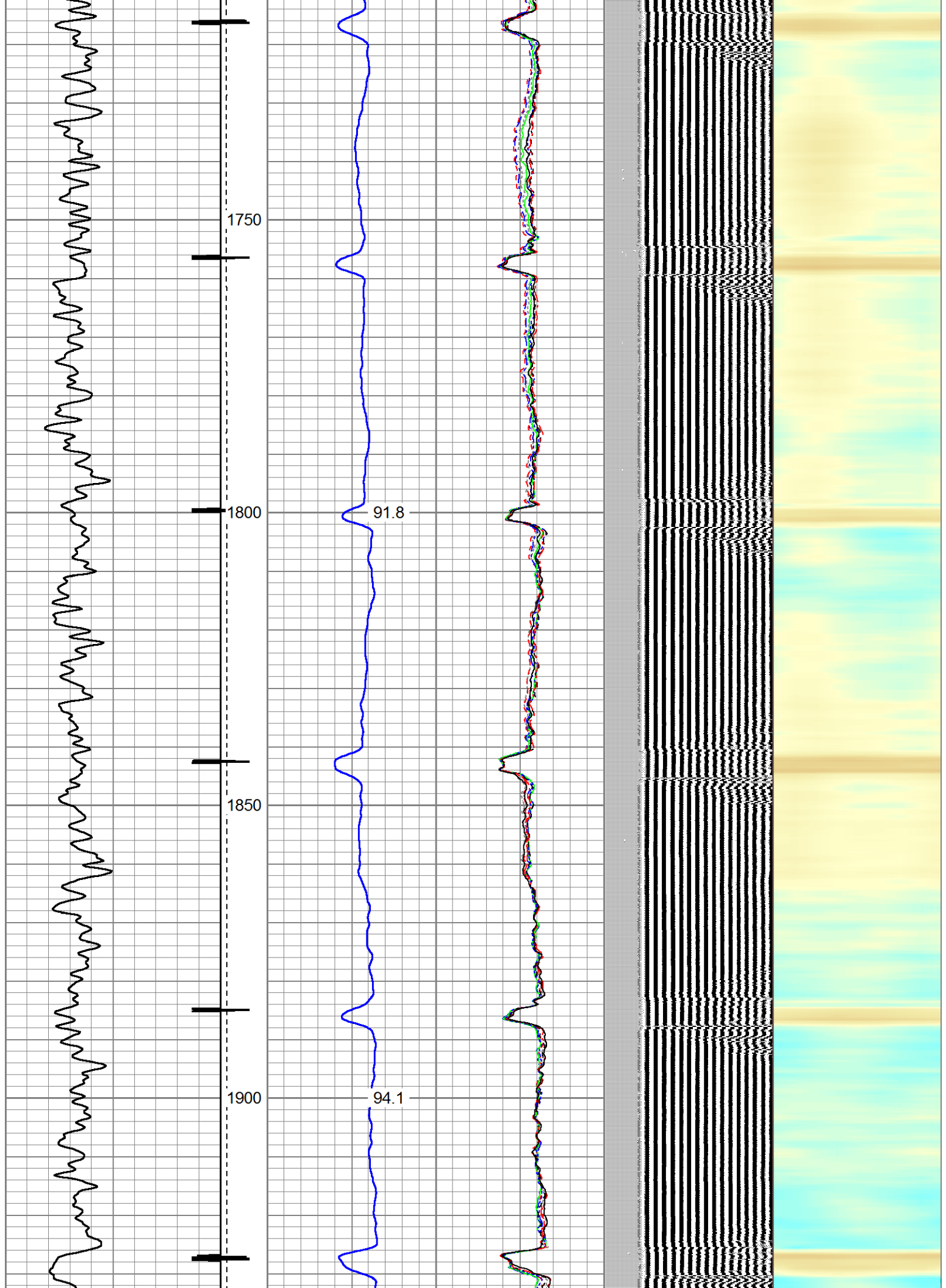


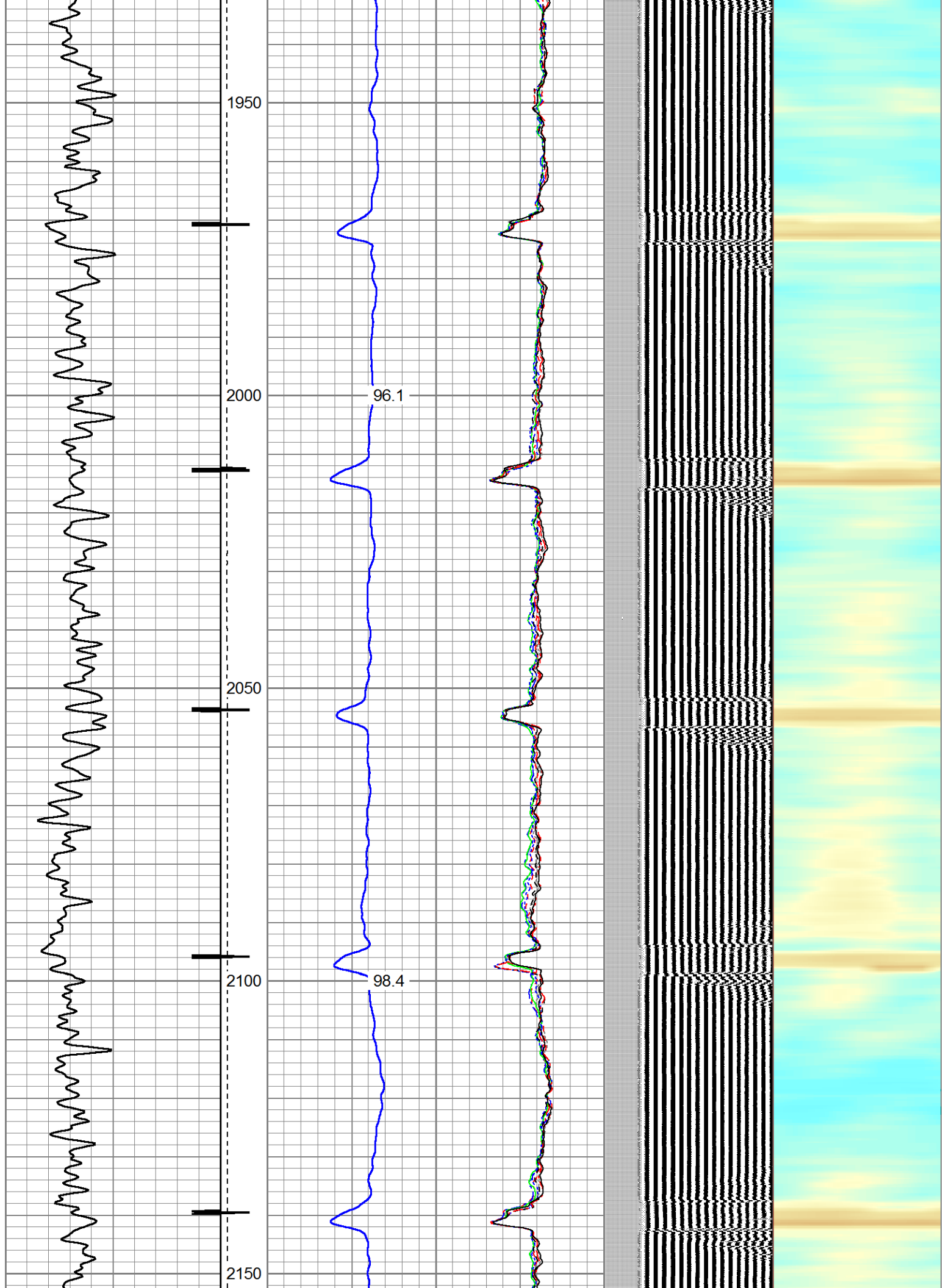


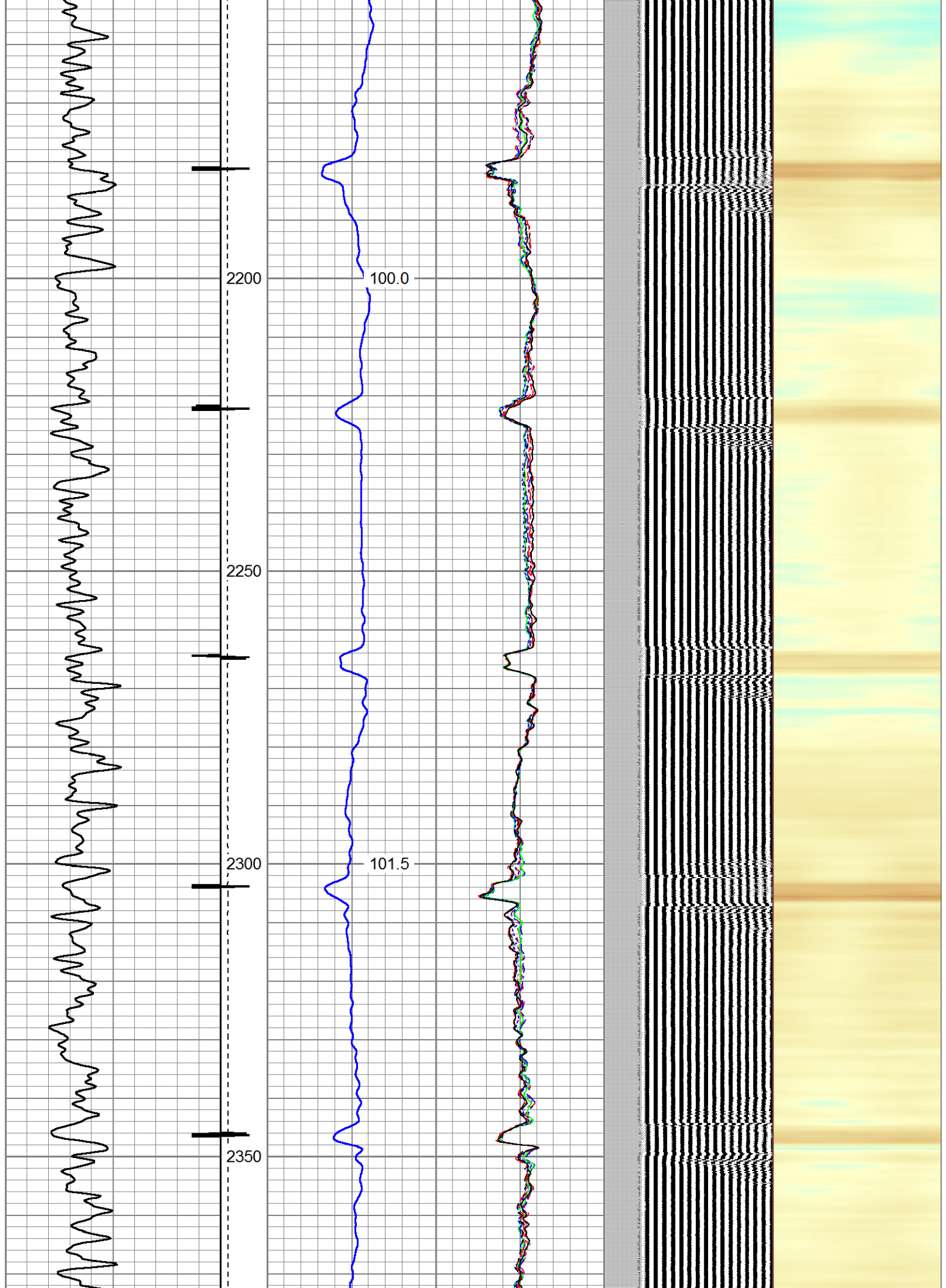




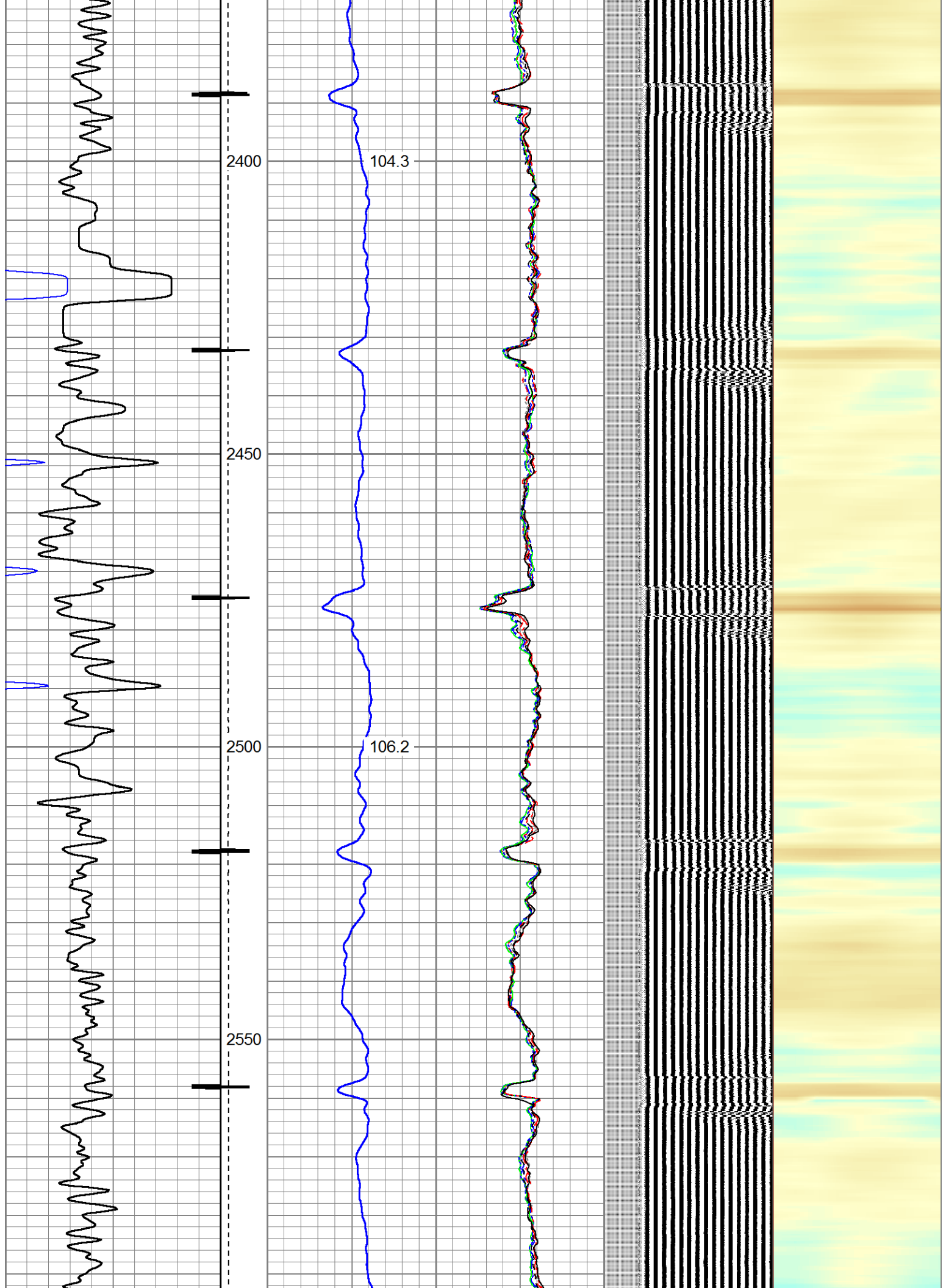




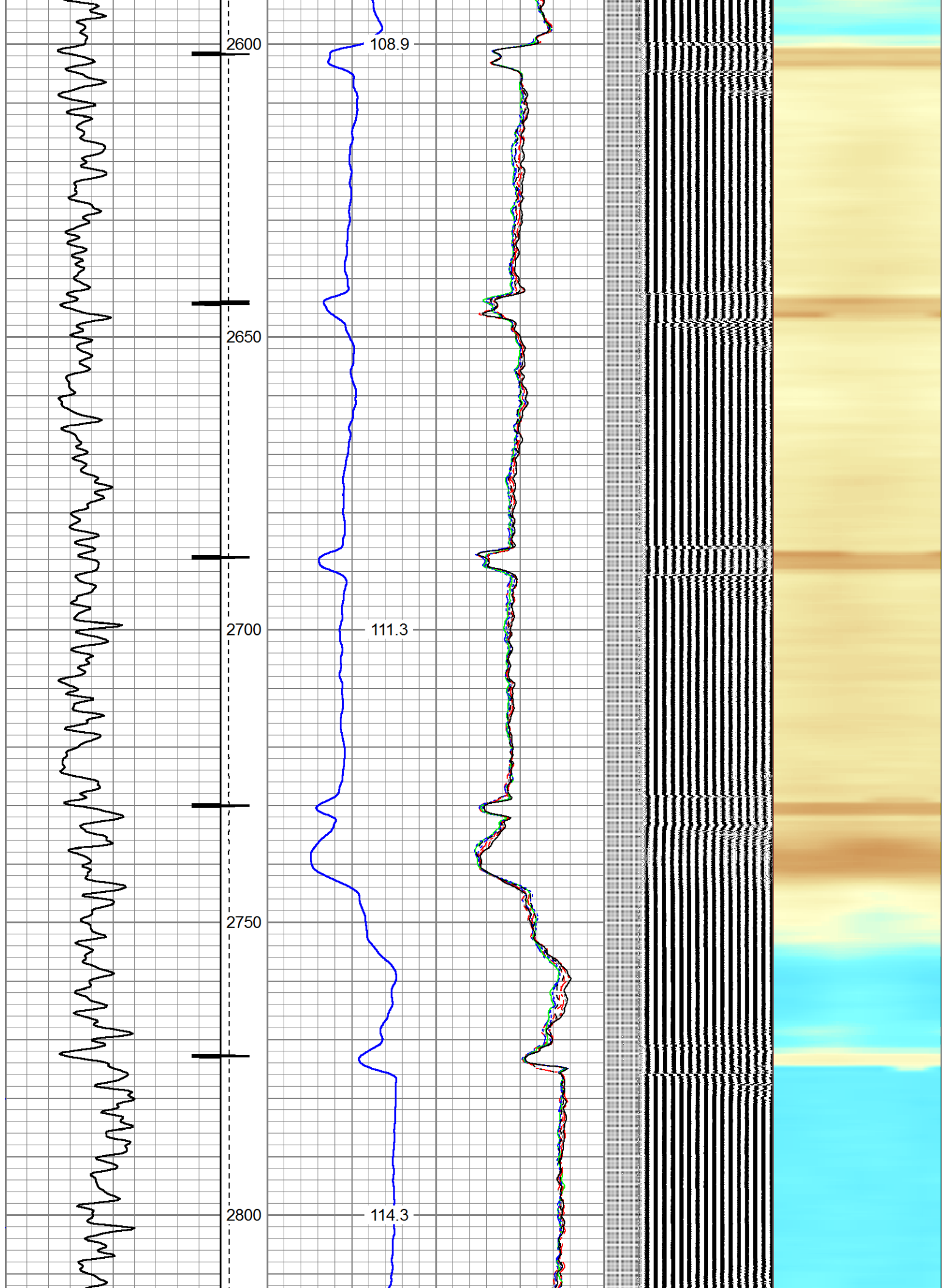


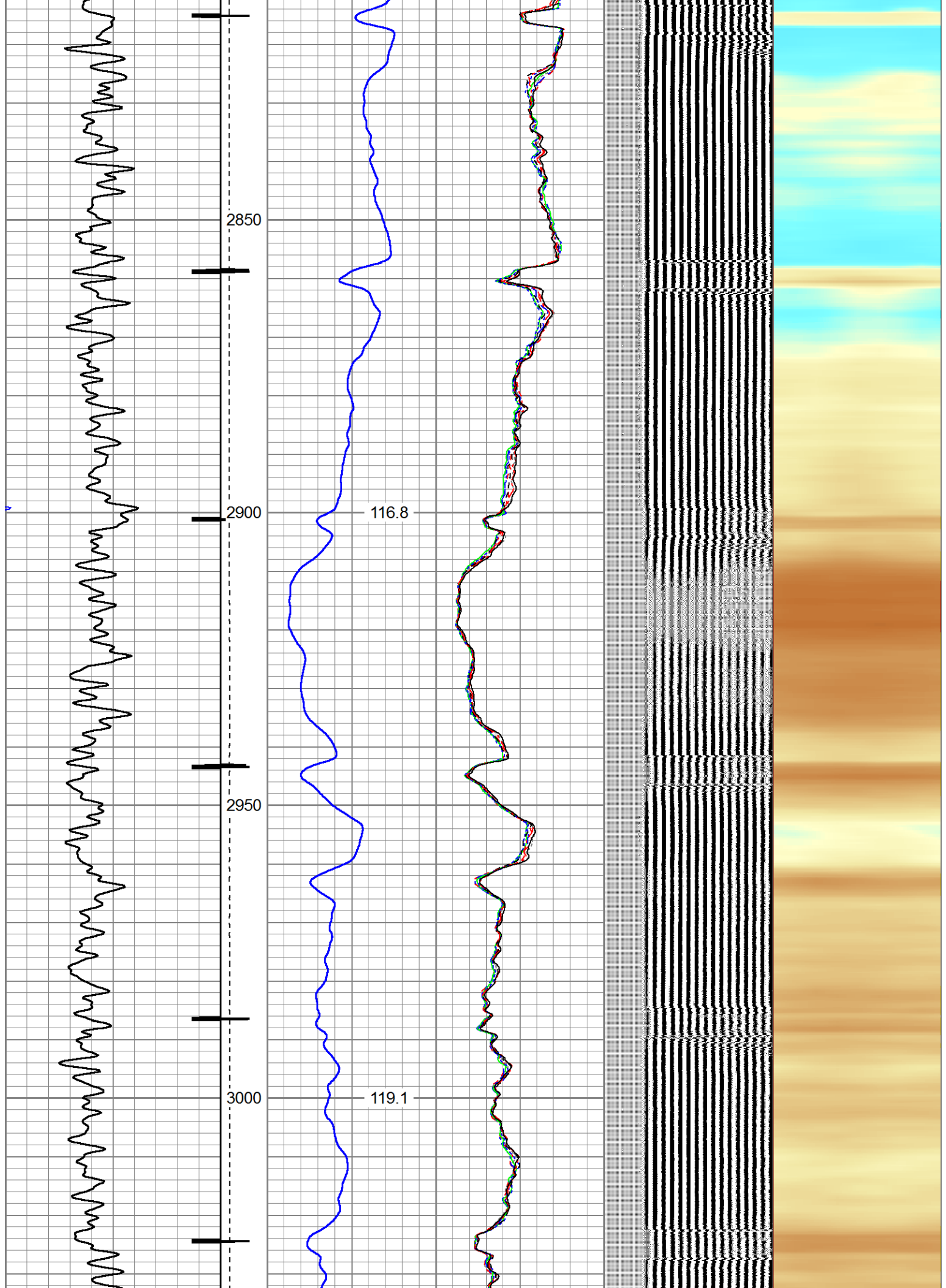


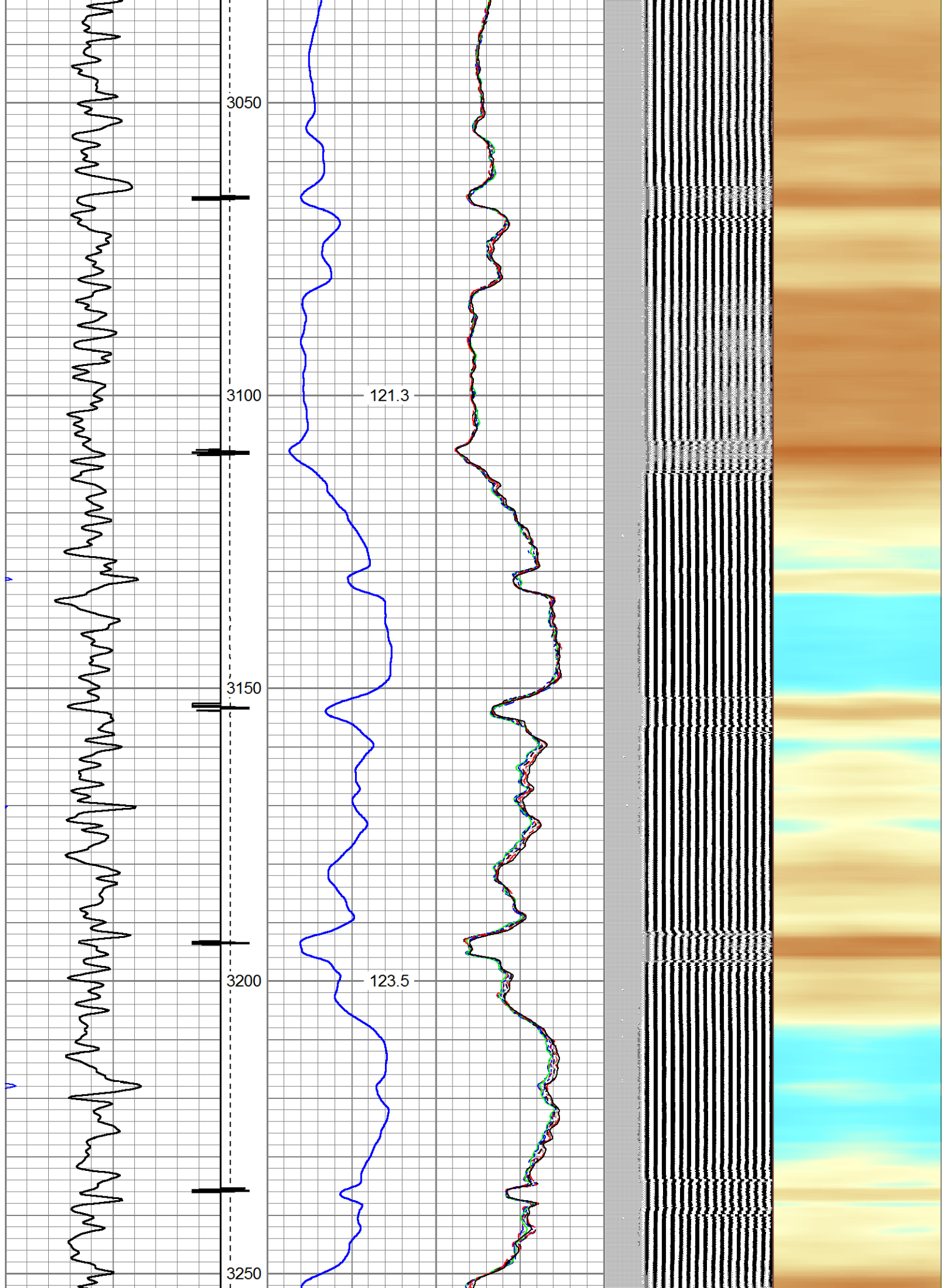




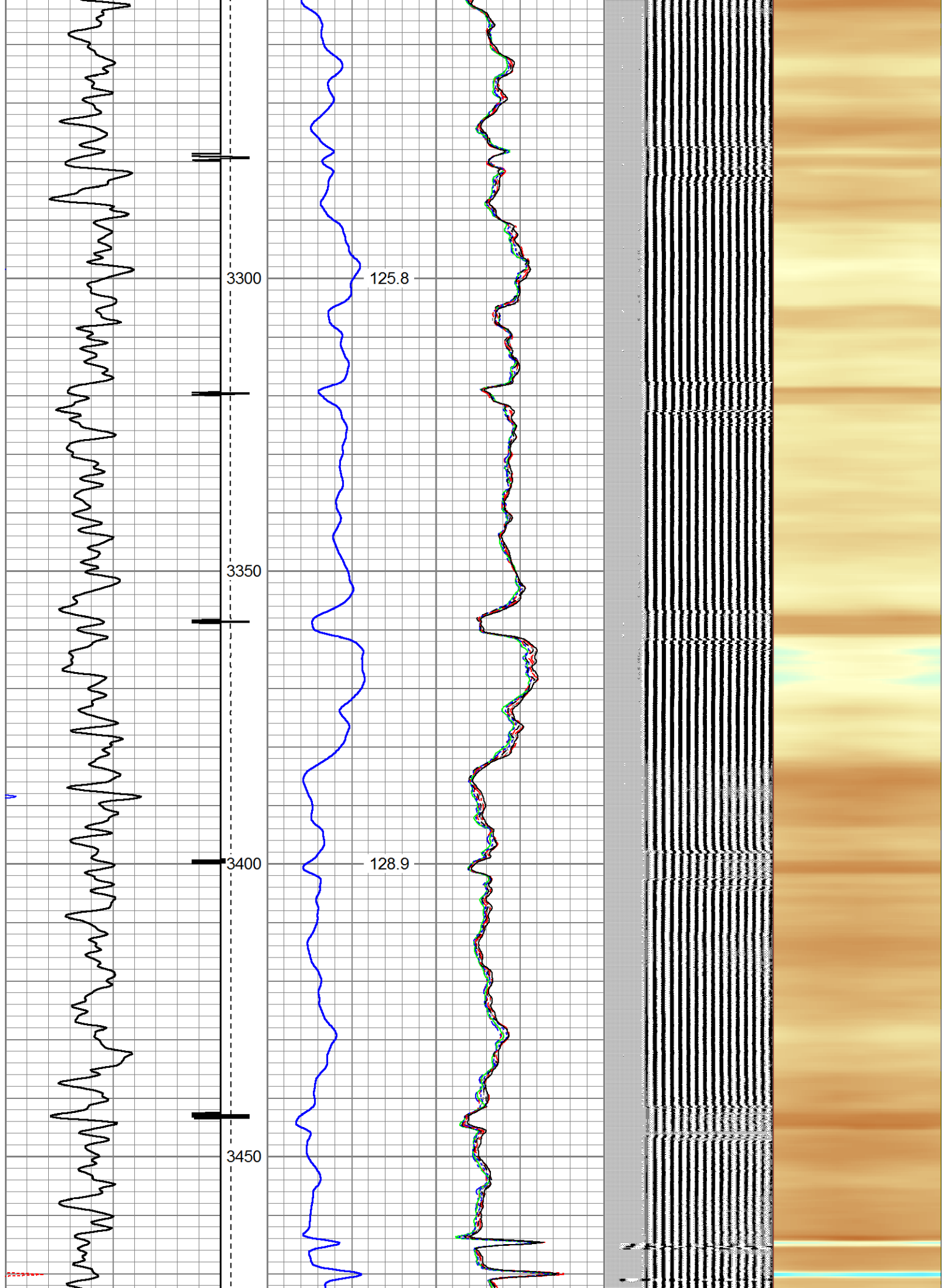


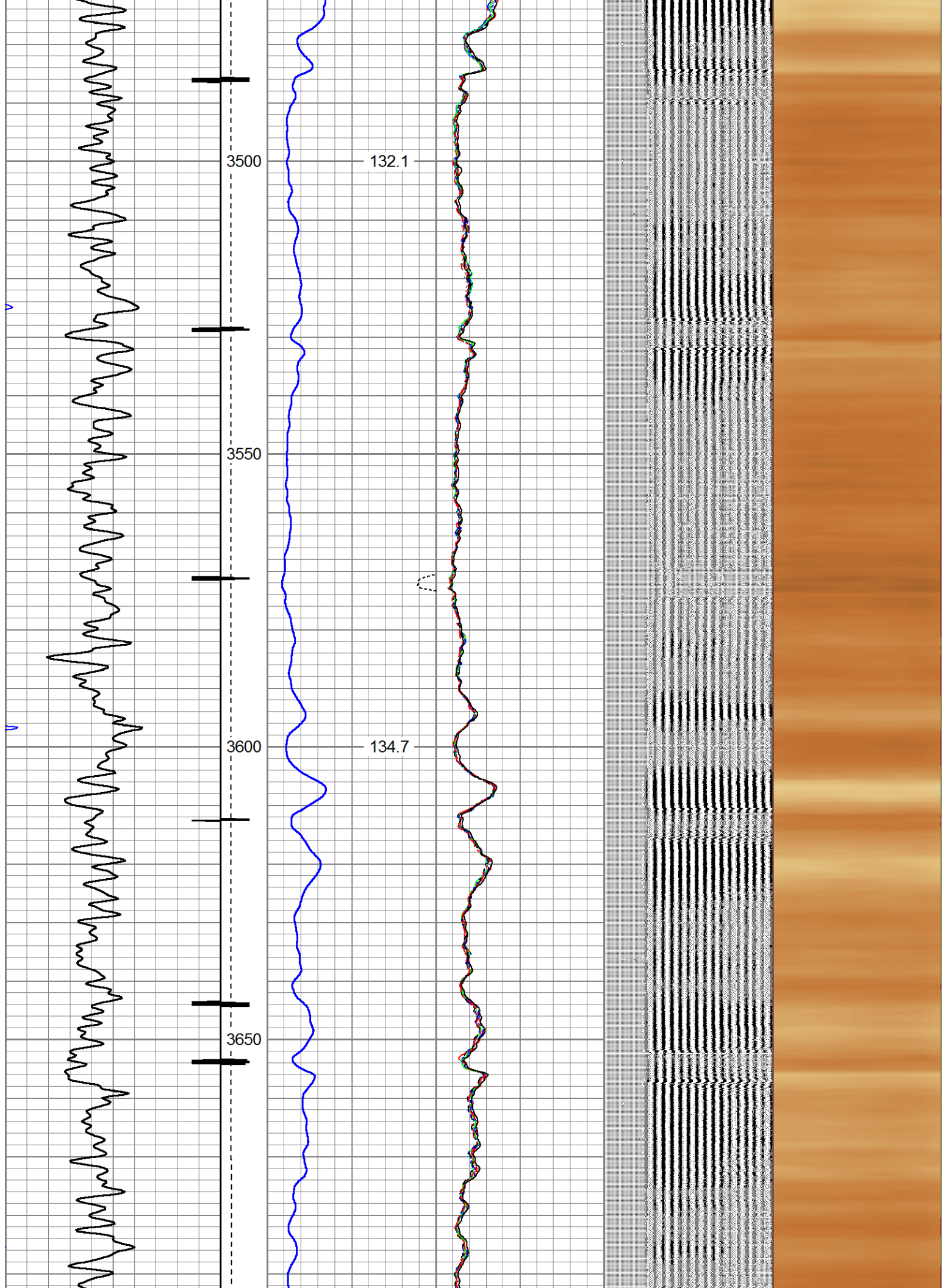




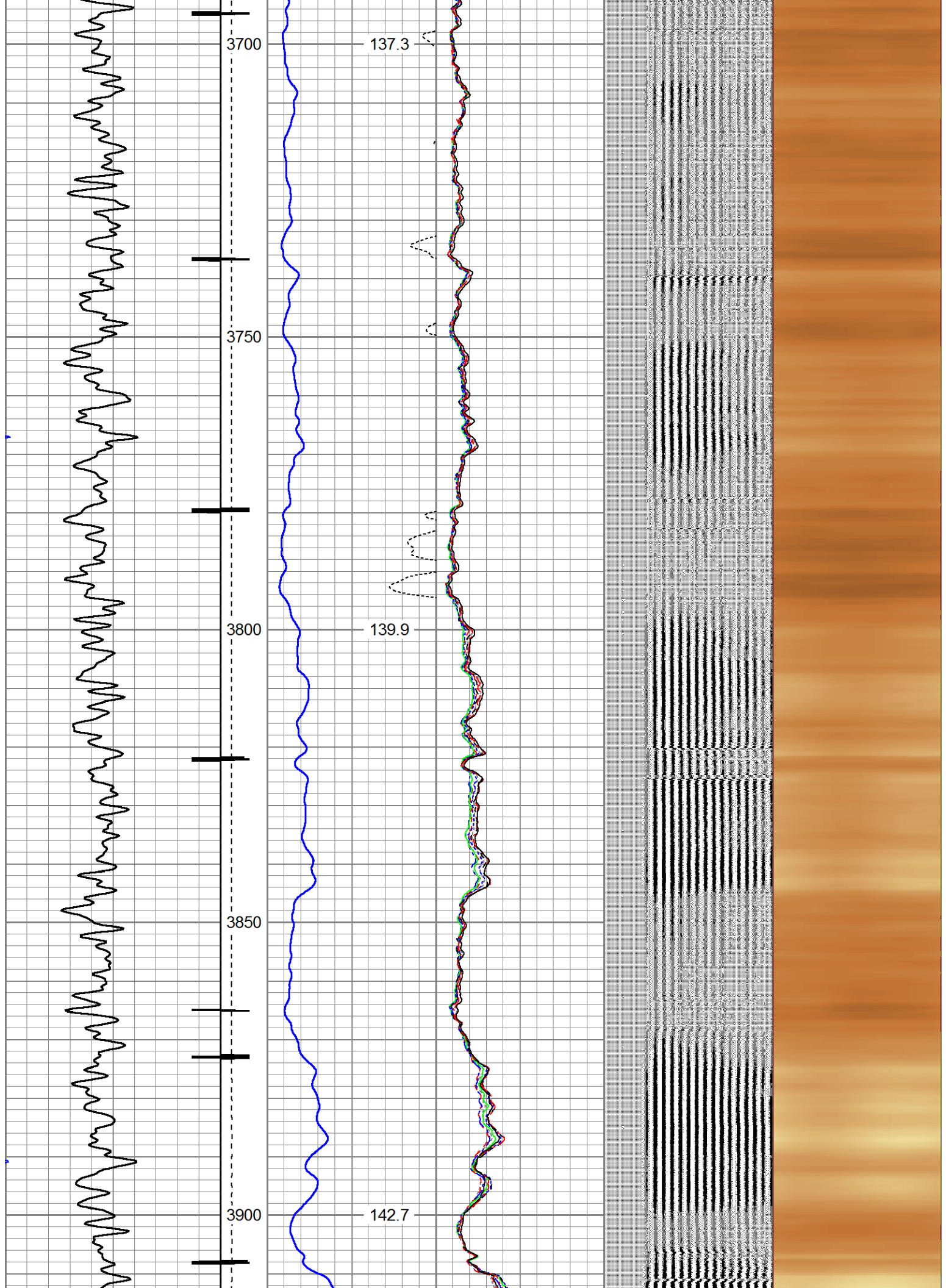


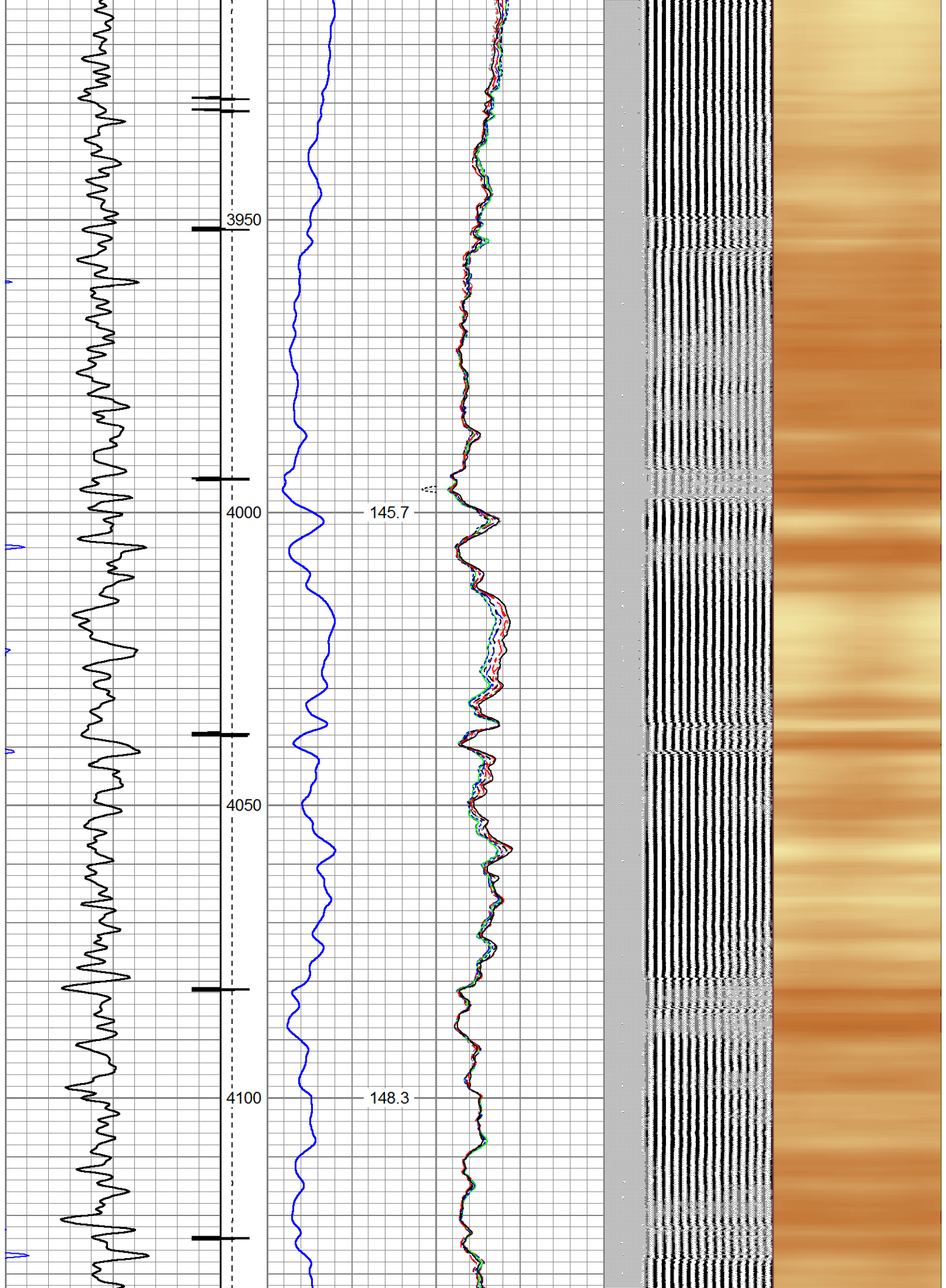


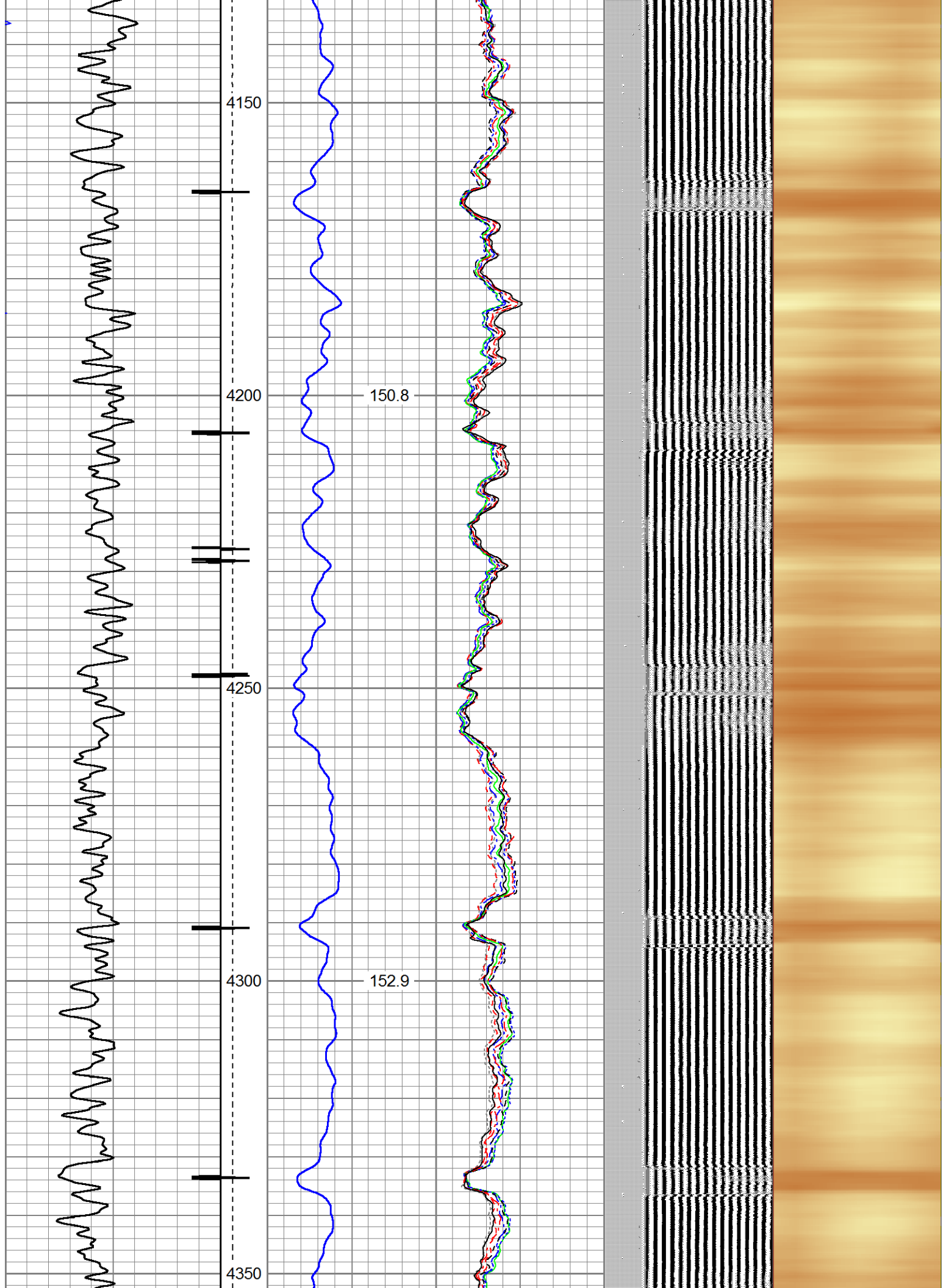




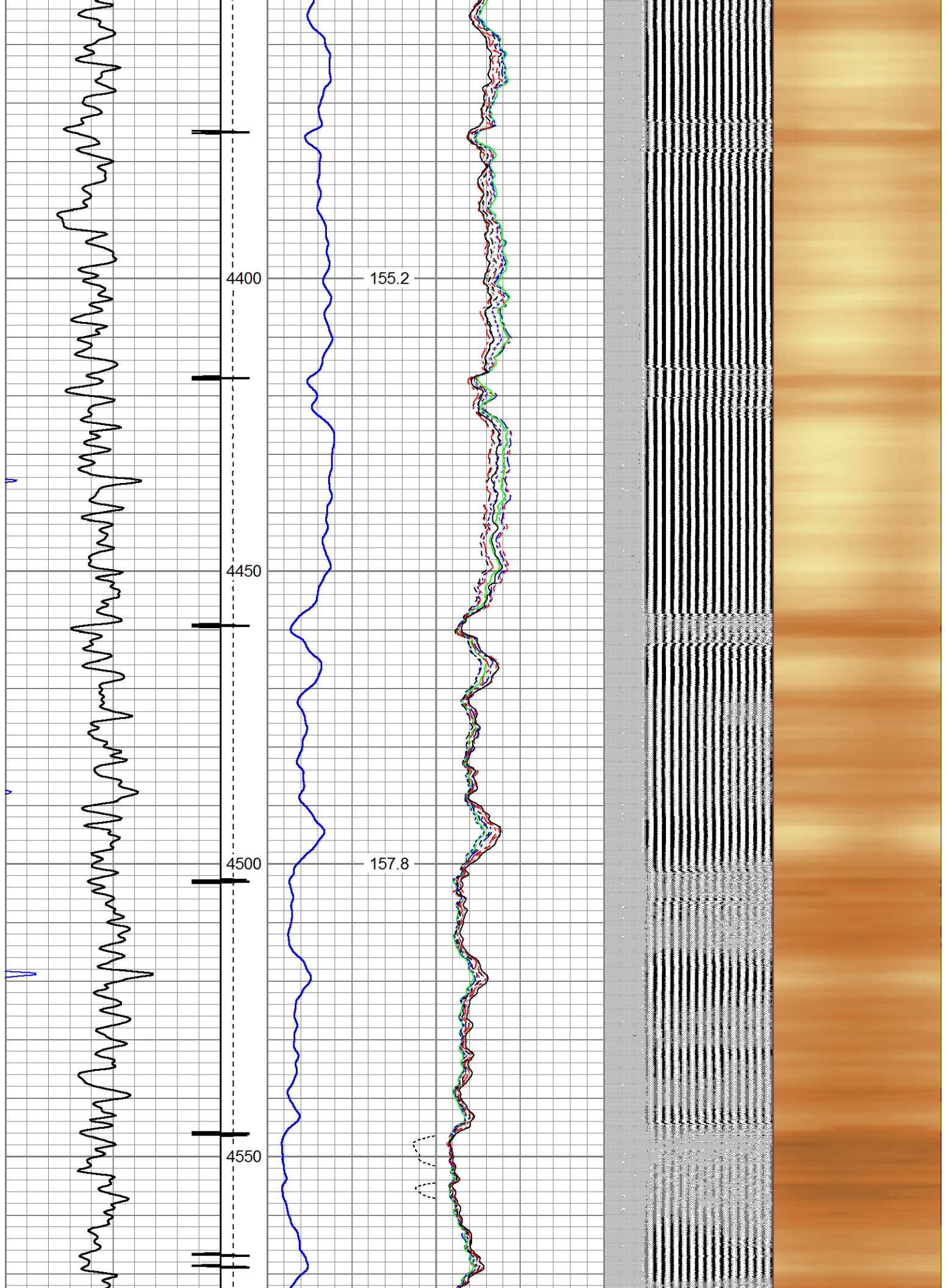


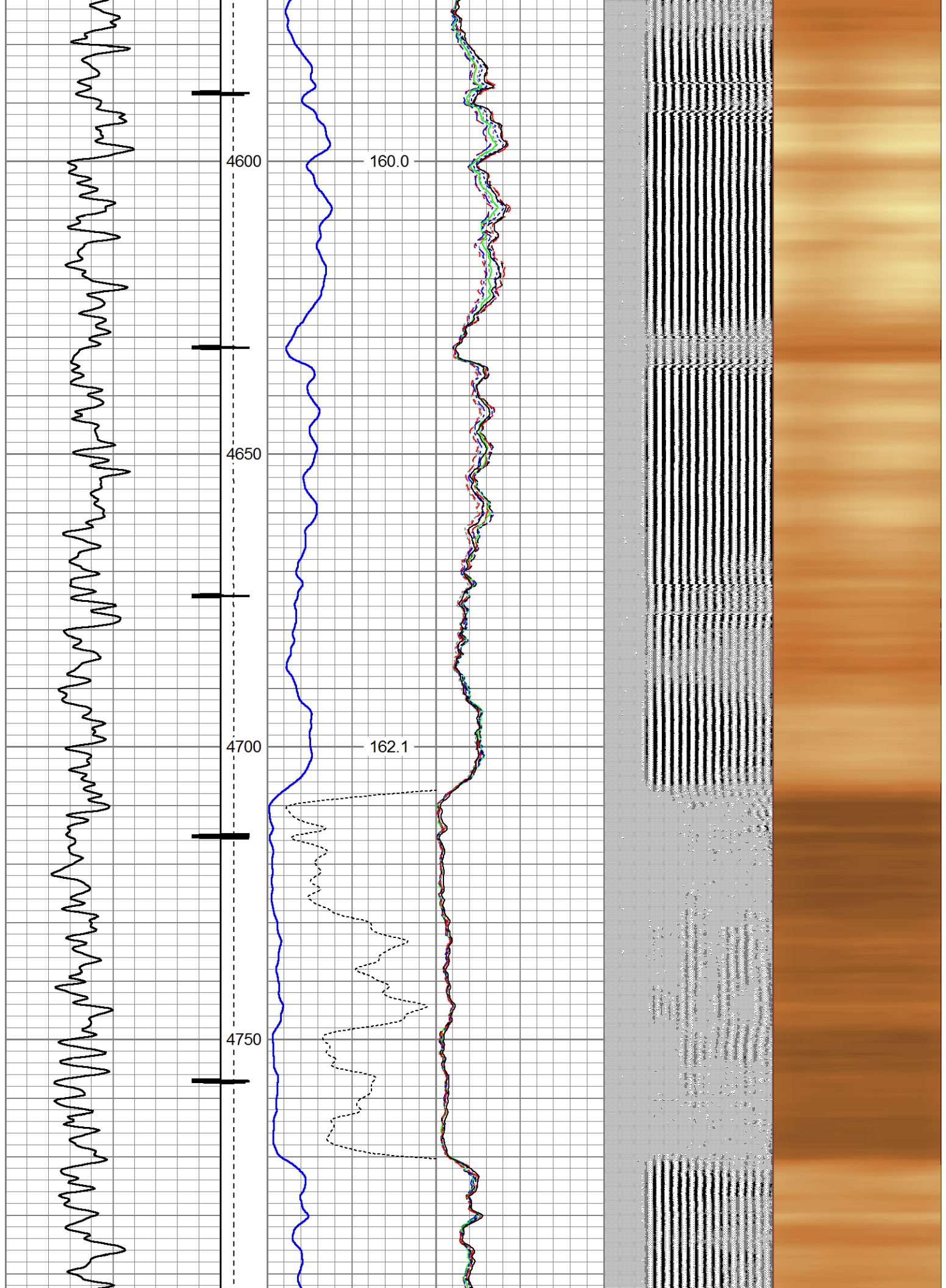




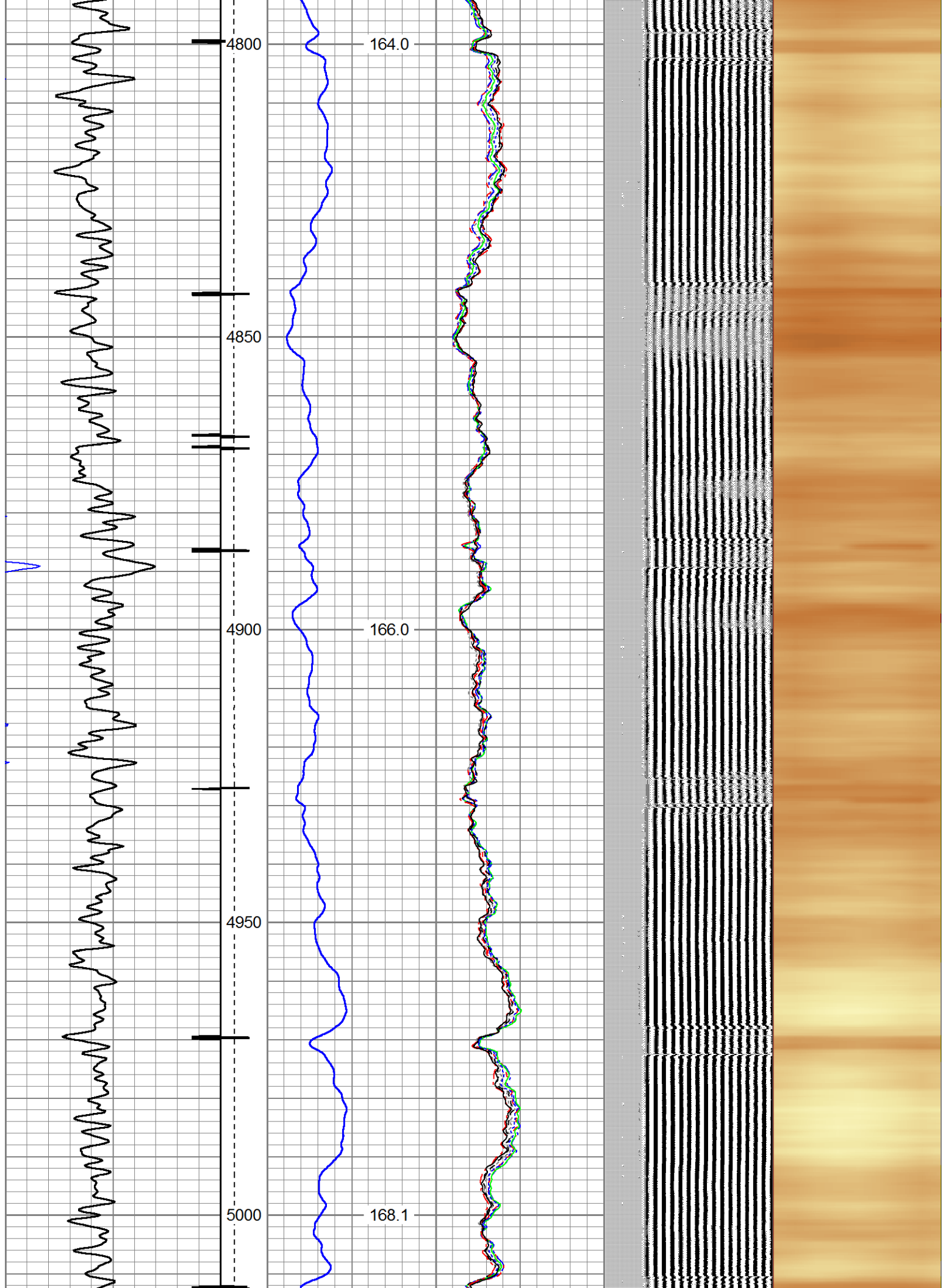


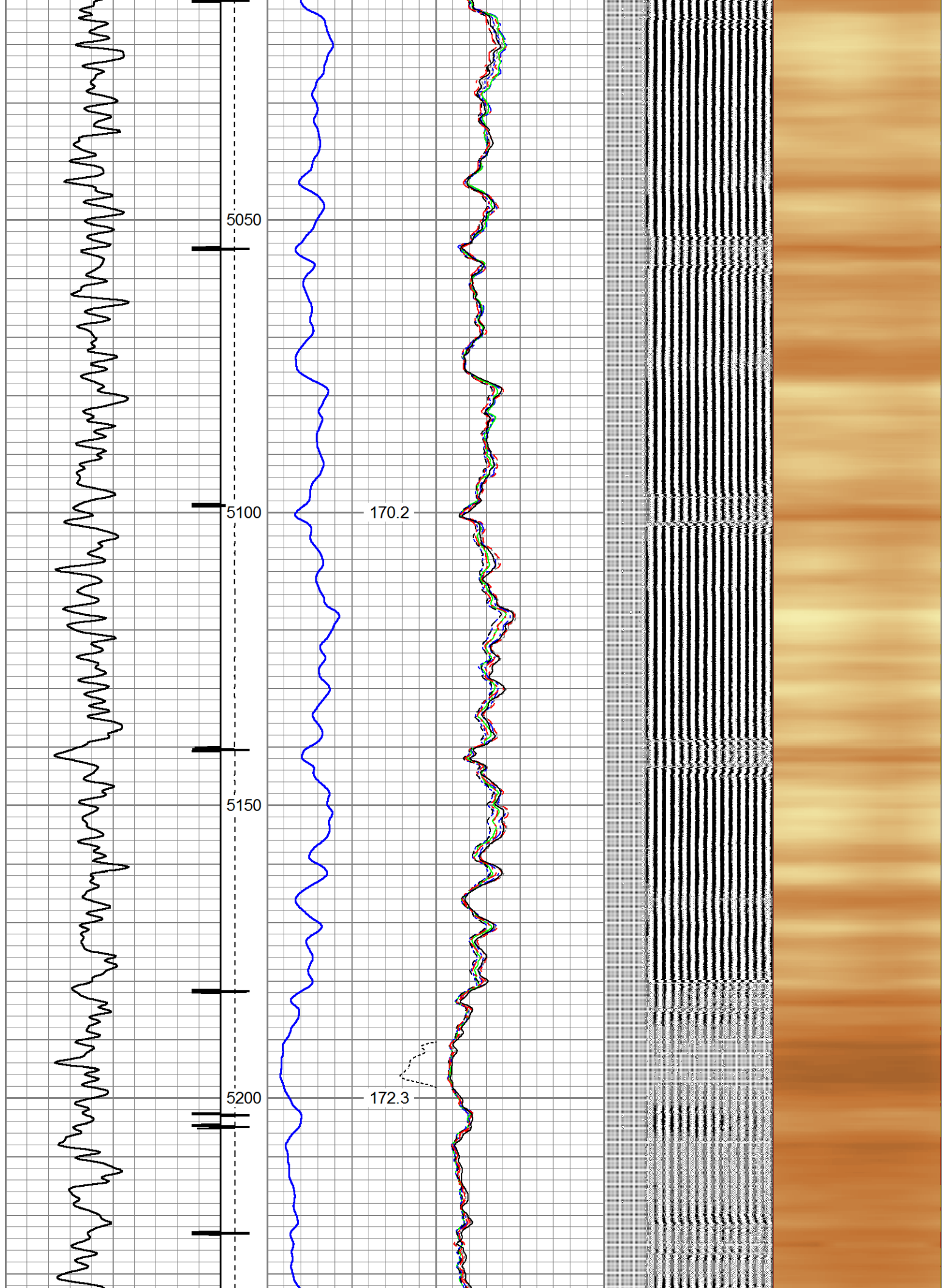


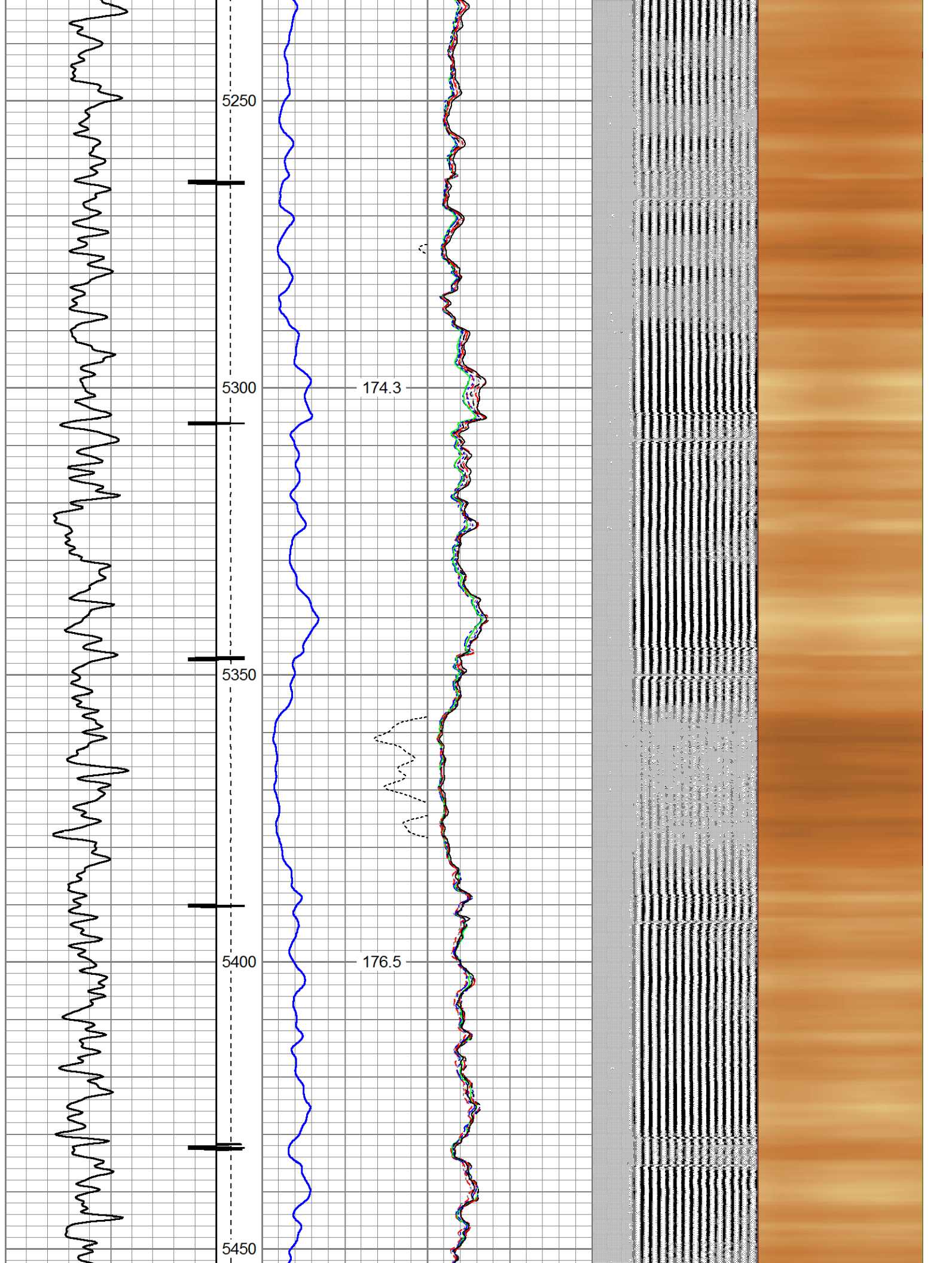




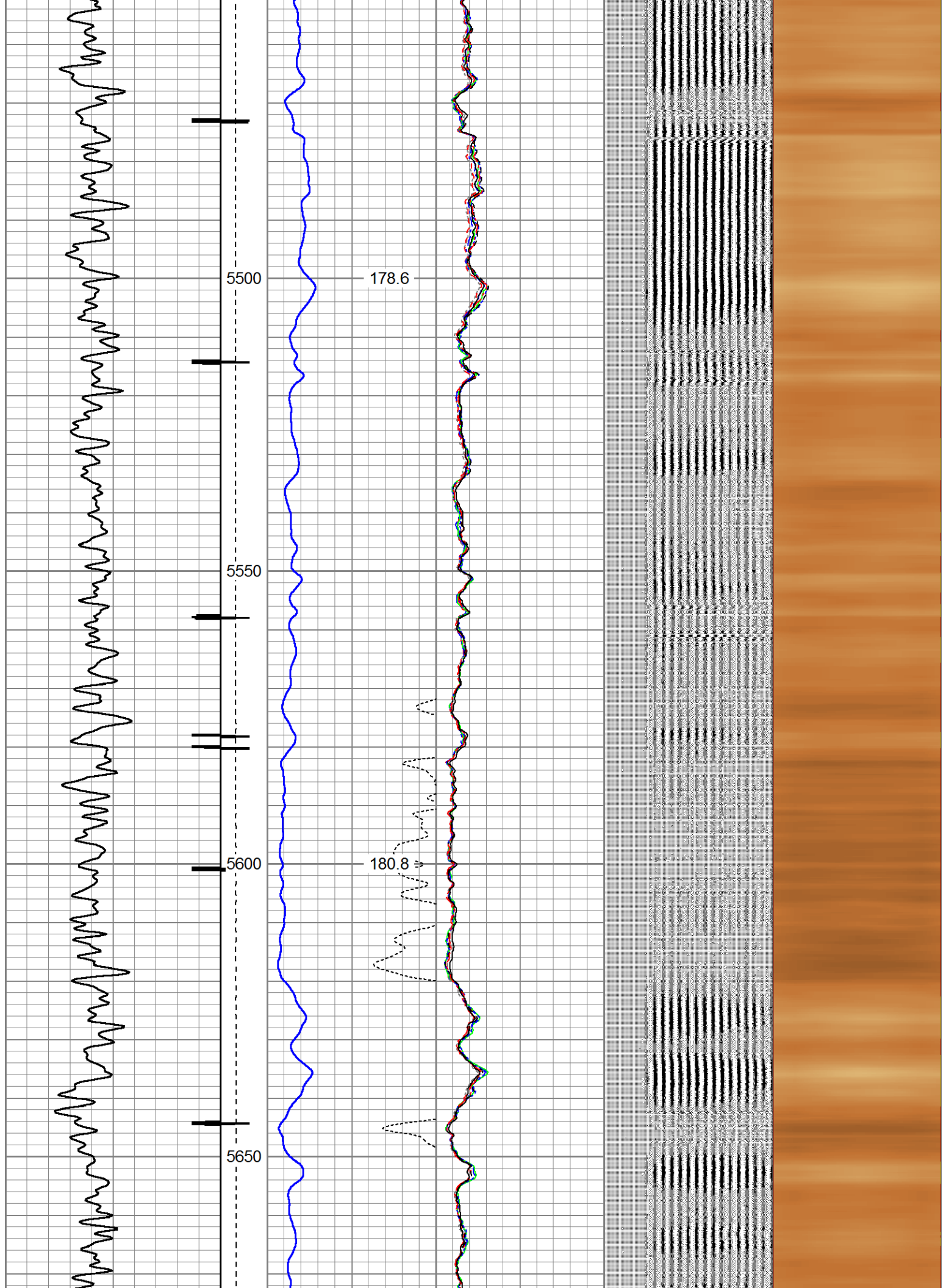




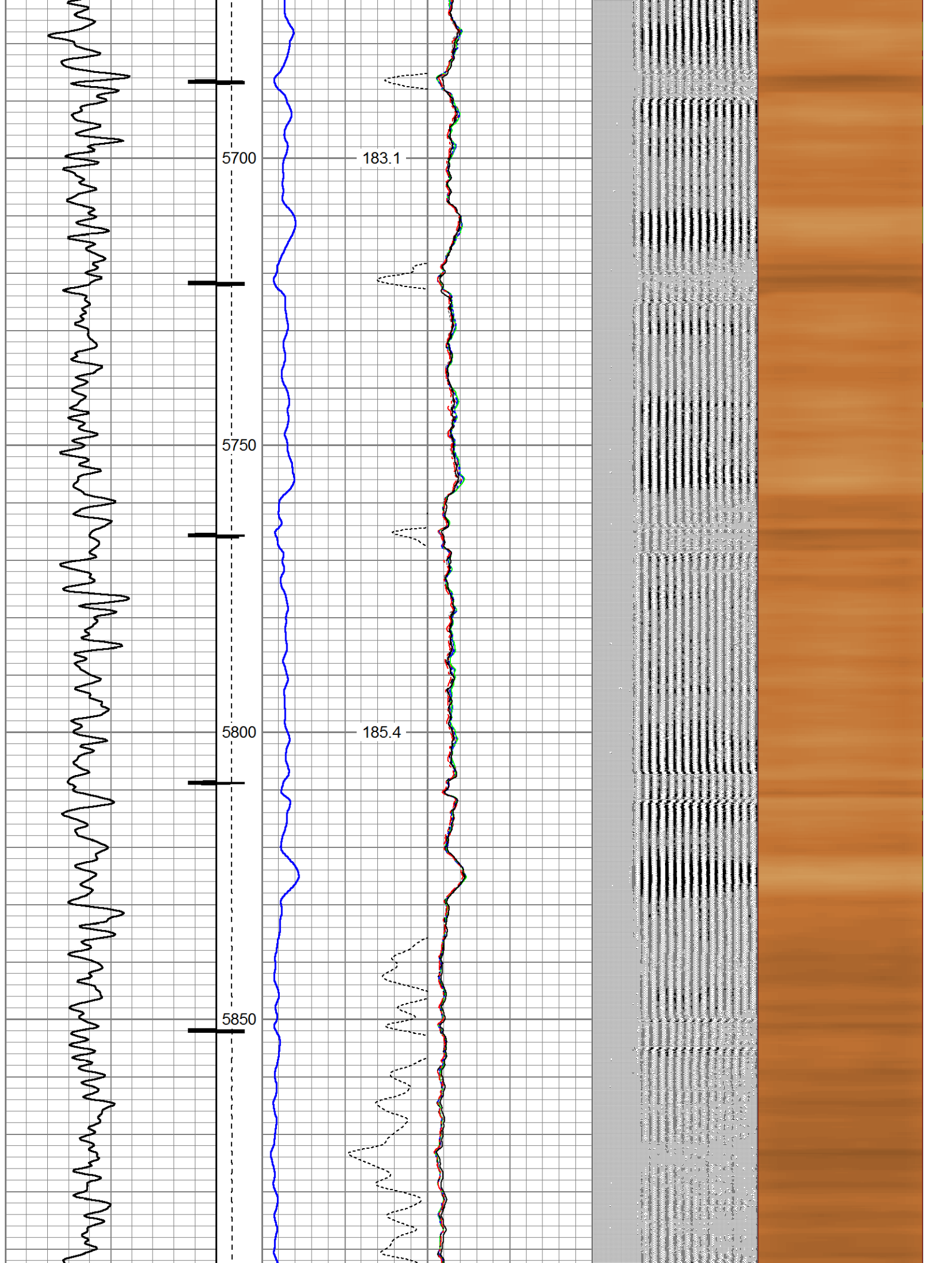


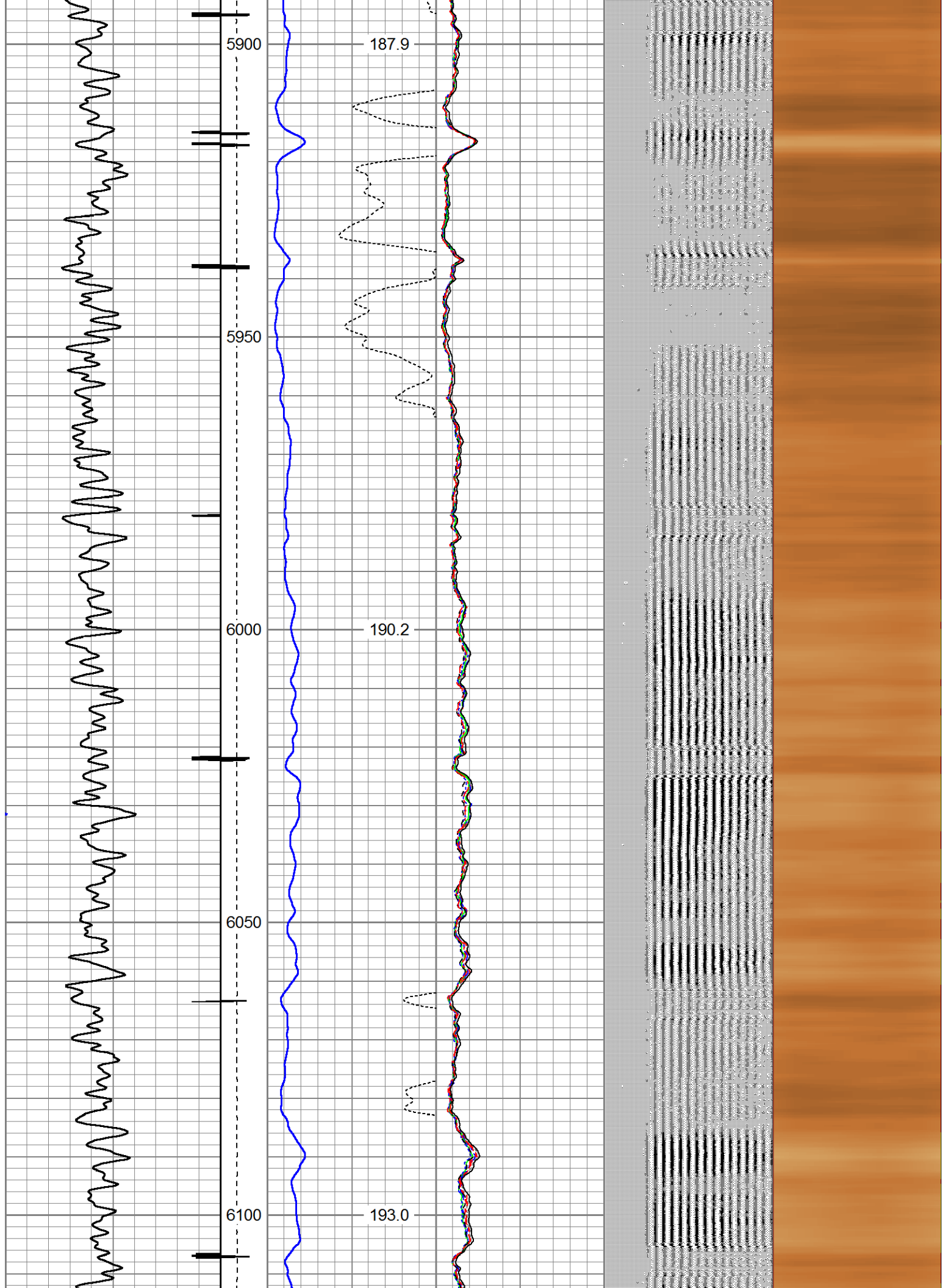




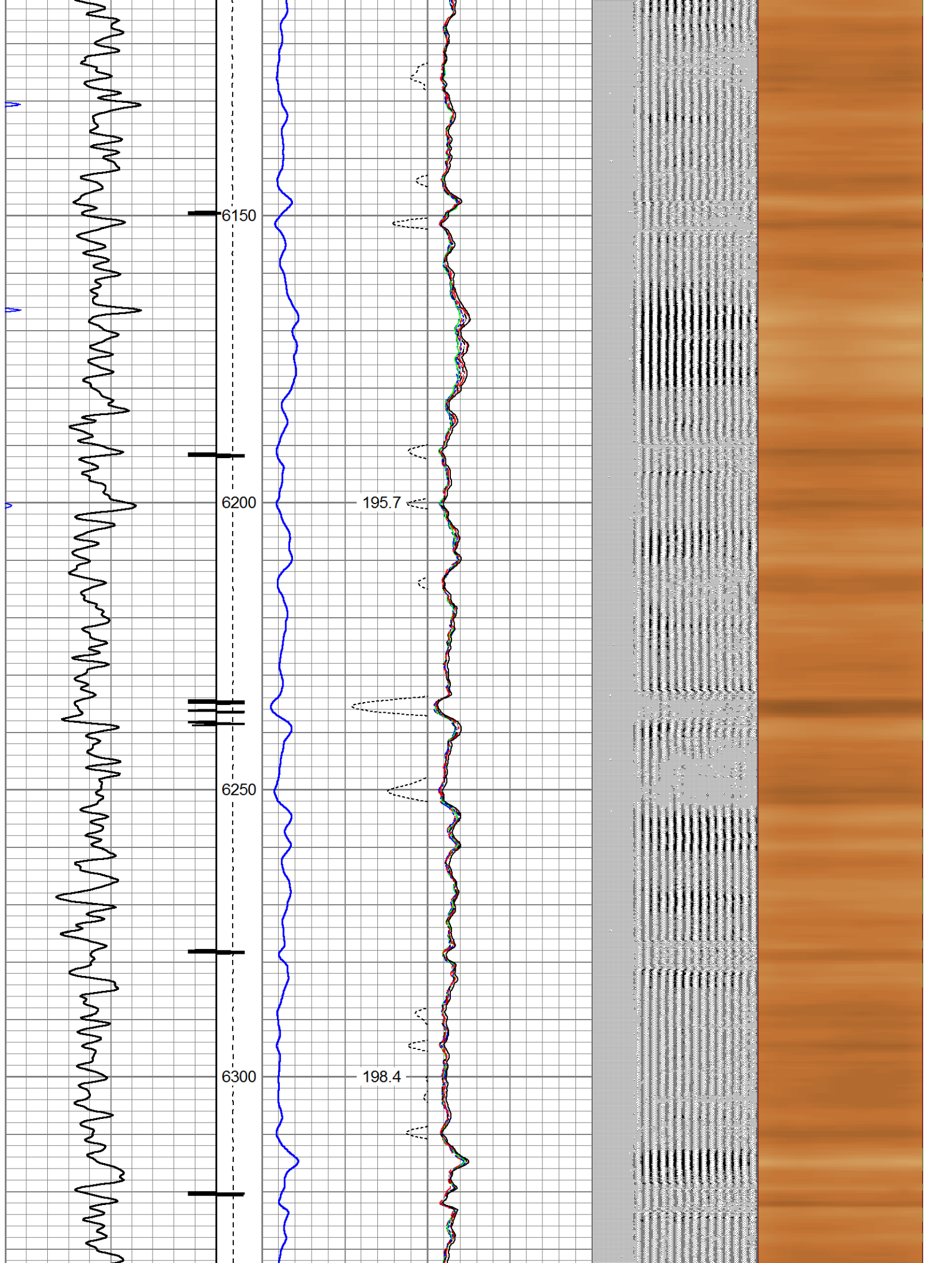


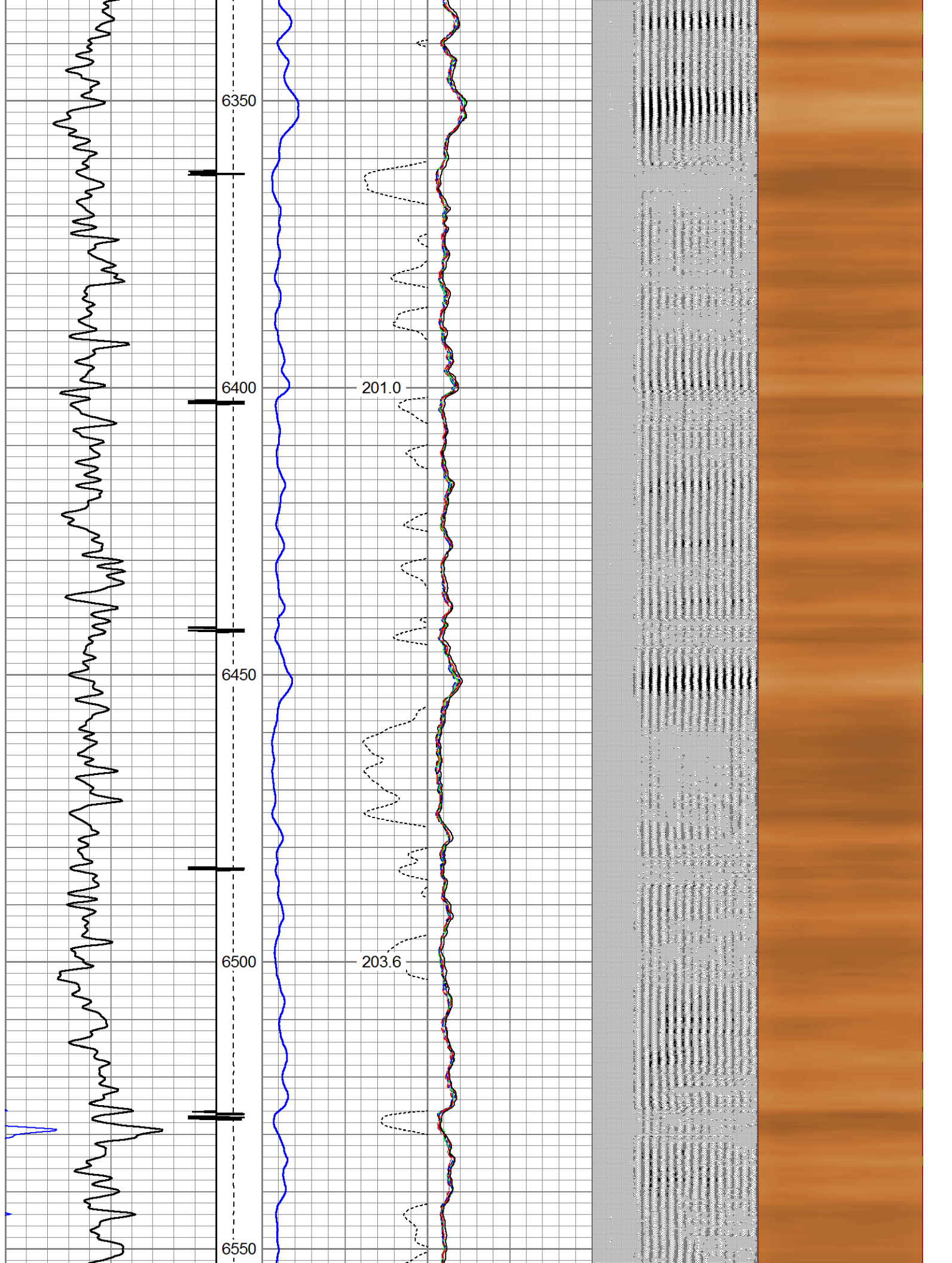




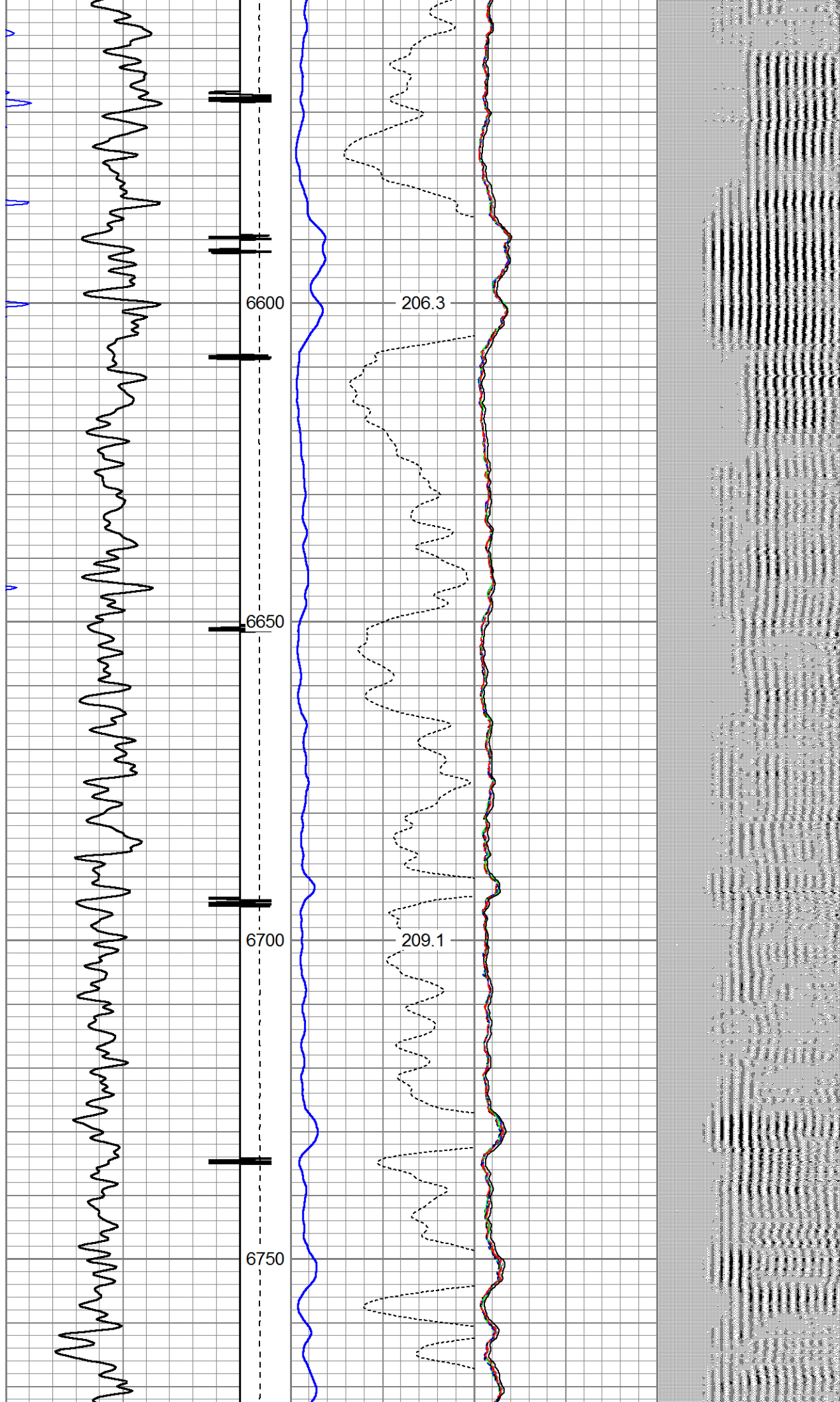


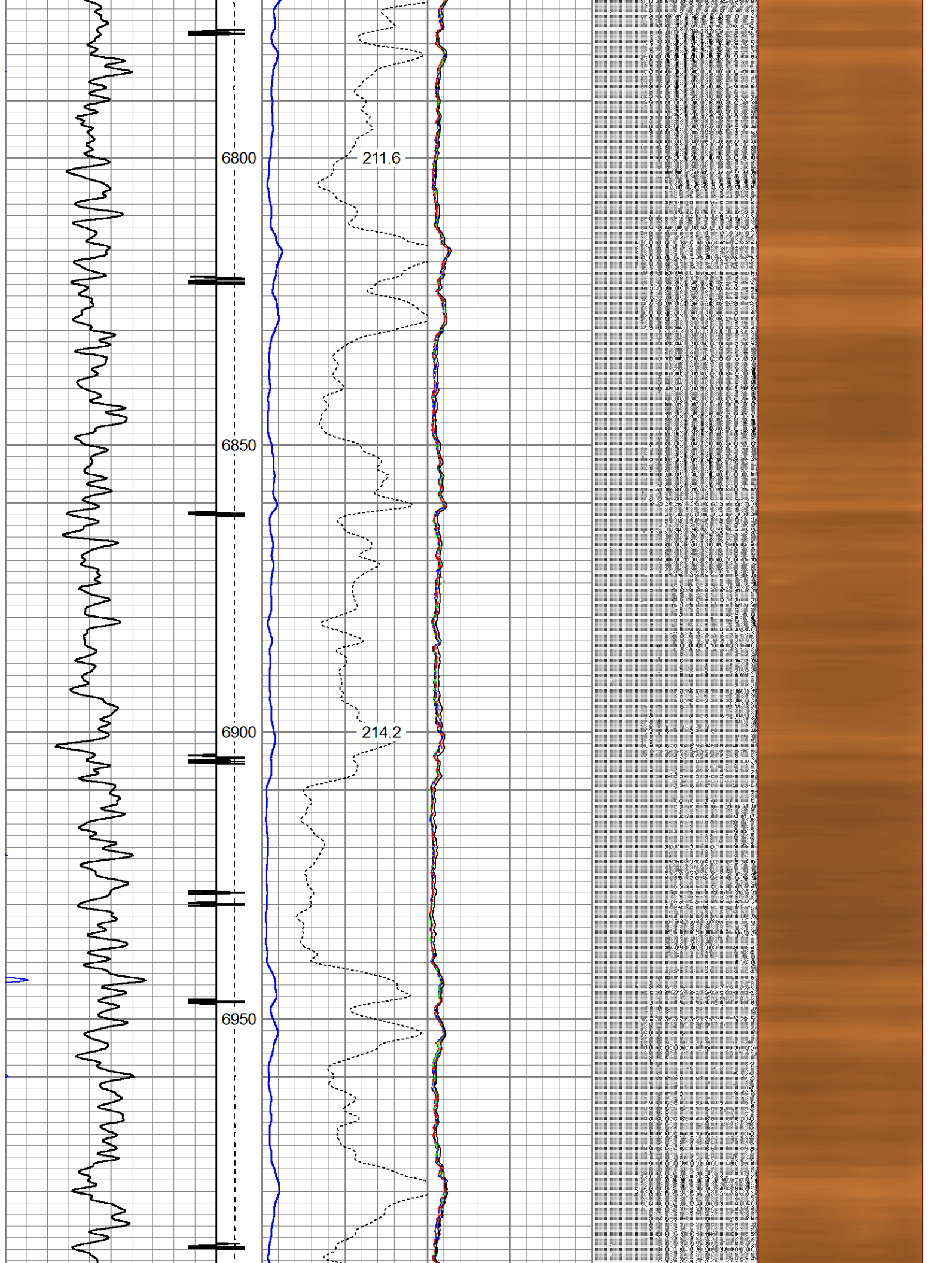


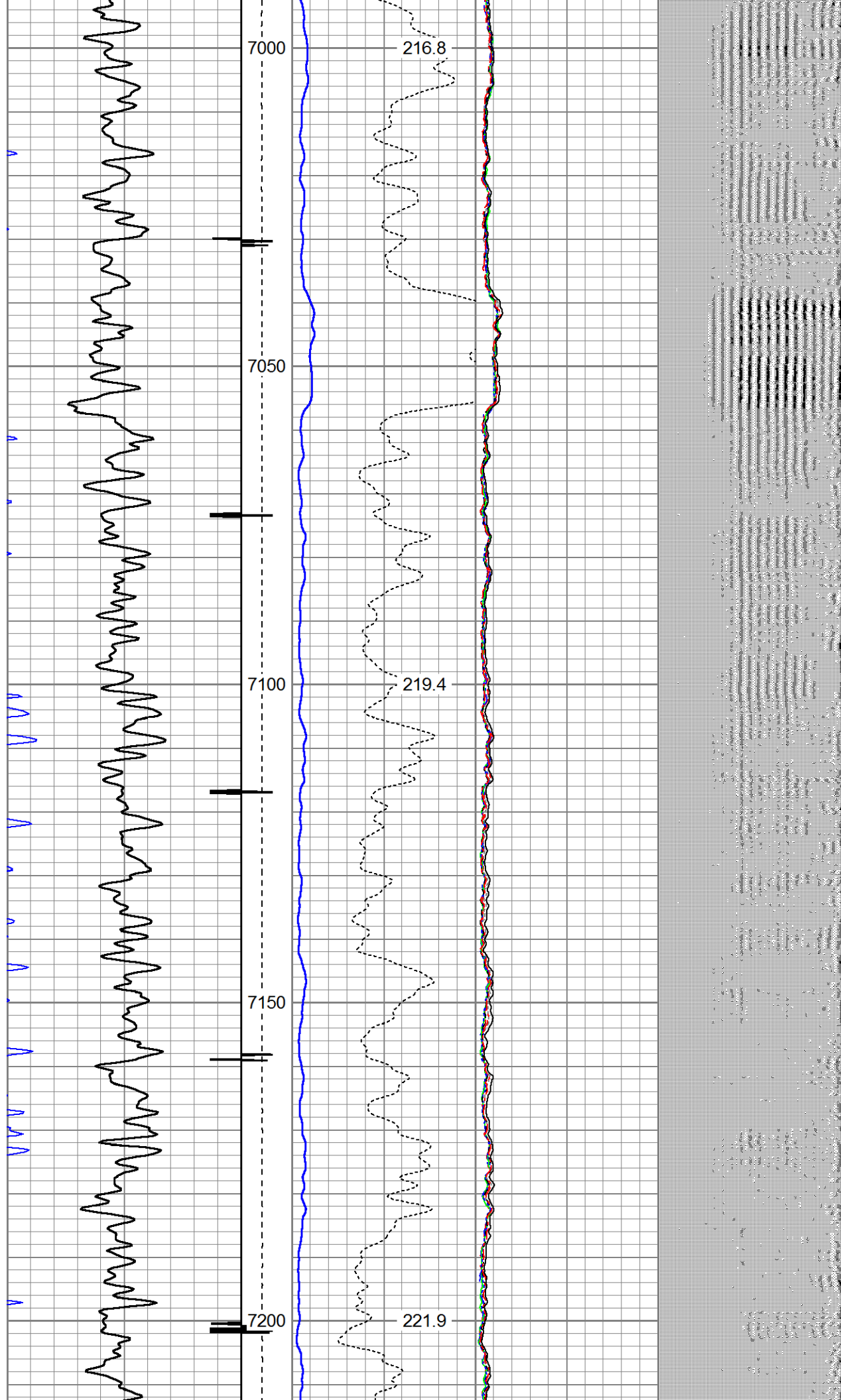




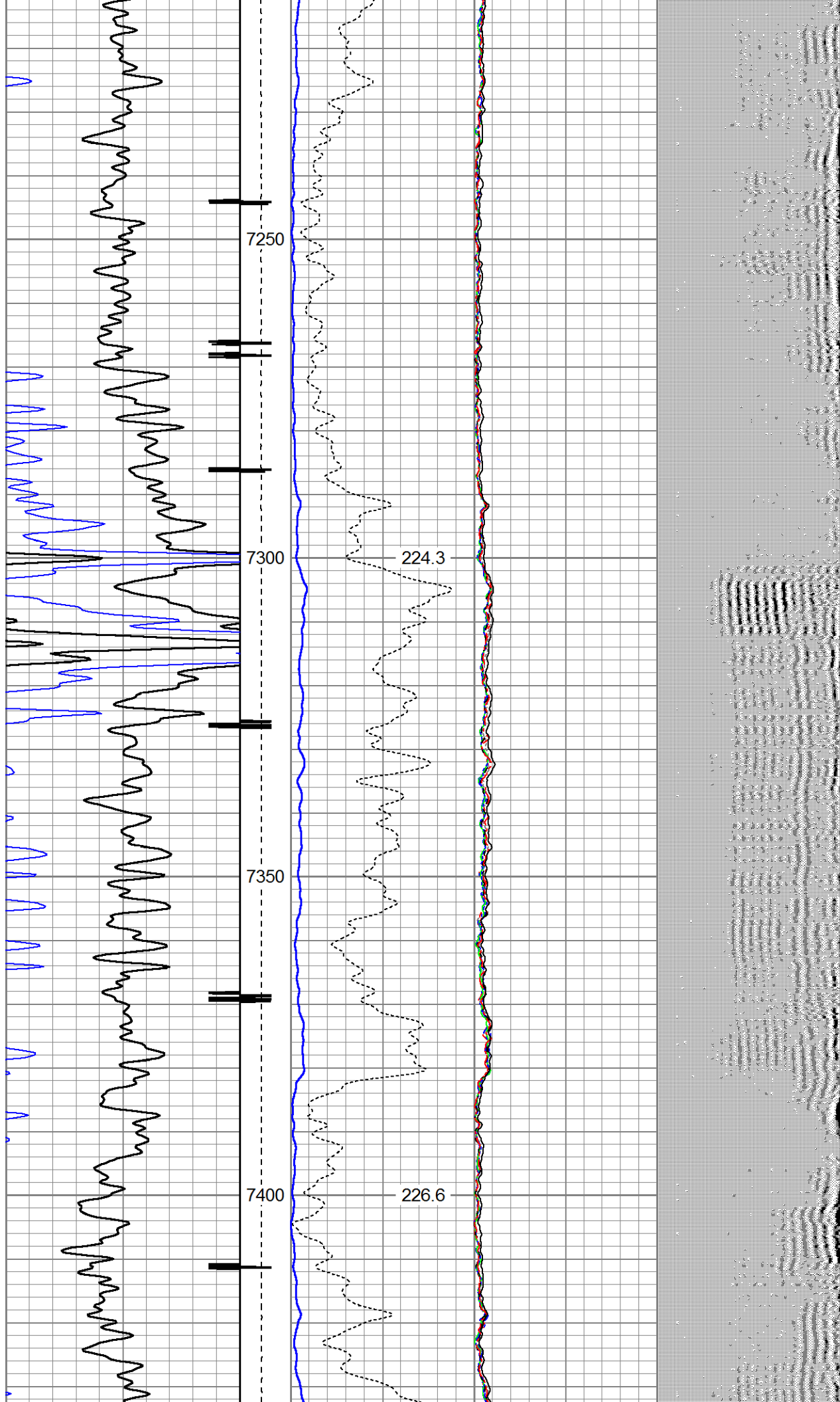




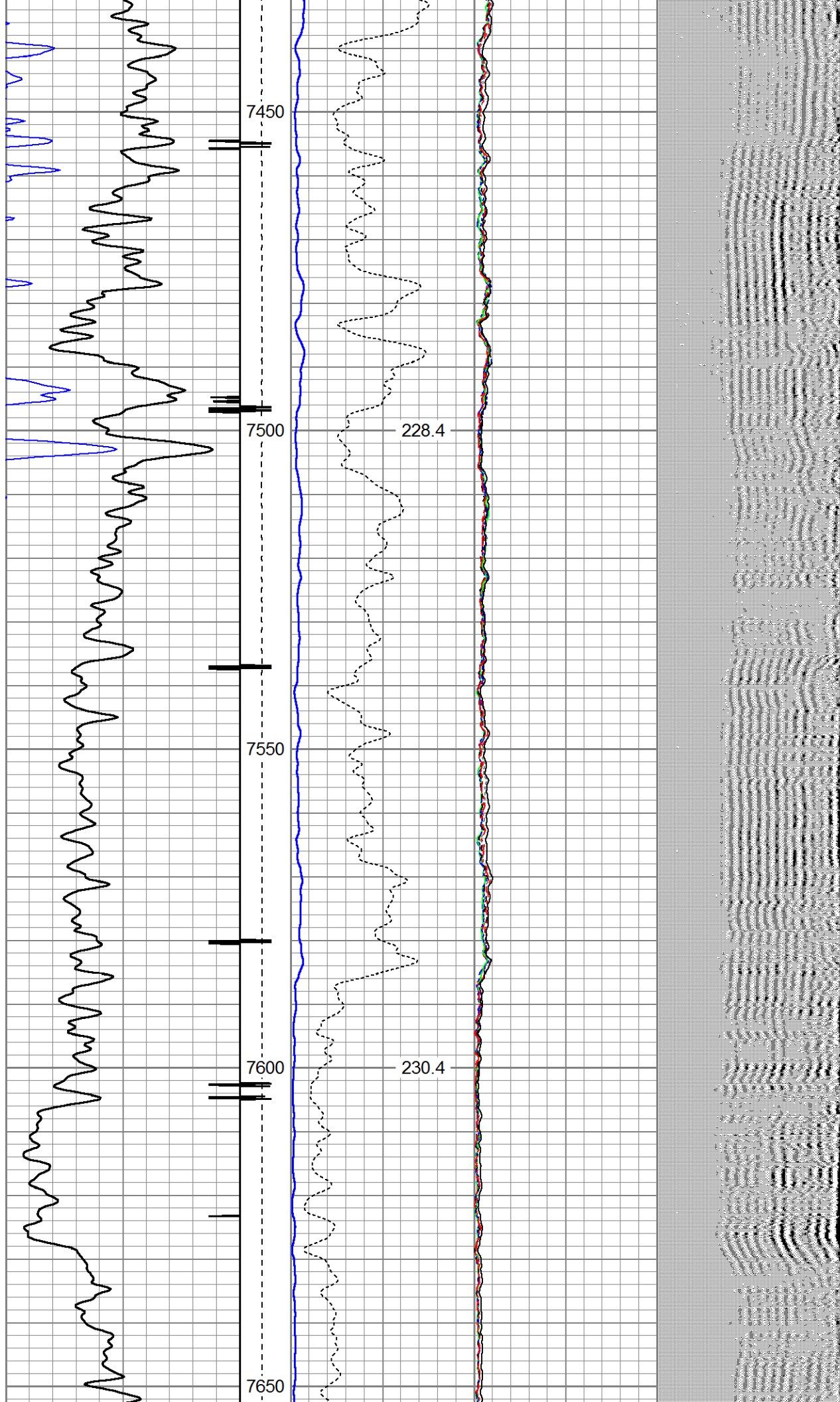


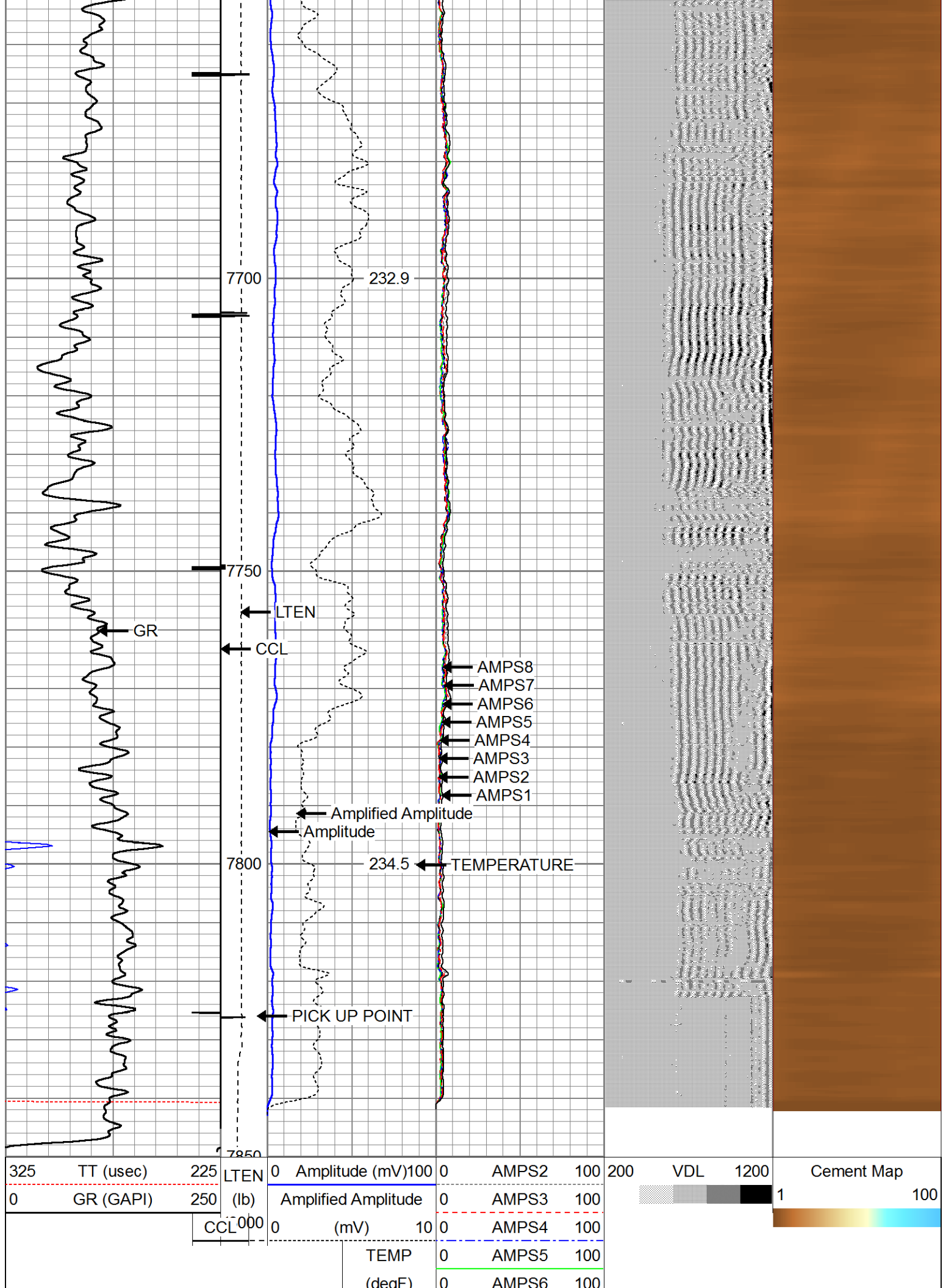












(log)

0	AMPS7	100
0	AMPS8	100
0	AMPS1	100



Company KERR-MCGEE OIL AND GAS  
Well HEIT ANTONE C UNIT 2  
Field WATTERBERG  
County WELD  
State CO





RADIAL CEMENT BOND LOG  
GAMMA RAY  
CCL

Company		KERR-MCGEE OIL AND GAS					
Well		HEIT ANTONE C UNIT 2					
Field		WATTERBERG					
County		WELD					
State		CO					
Location:		API # : 05-123-10846 NENW LAT:40.04110 LONG: -104.88150 SEC 22 TWP 1N RGE 67W					
Permanent Datum		GL	Elevation 4985'				
Log Measured From		KB 12'	Other Services NONE  Elevation K.B. 4997' D.F. 4996' G.L. 4985'				
Drilling Measured From		KB					
Date 7-17-2017							
Run Number ONE							
Depth Driller 8222'							
Depth Logger 4010'							
Bottom Logged Interval 4010'							
Top Log Interval SURFACE							
Open Hole Size 8.75"							
Type Fluid WATER							
Density / Viscosity N/A							
Max. Recorded Temp. 144							
Estimated Cement Top 933'							
Time Well Ready NA							
Time Logger on Bottom NA							
Equipment Number 62							
Location WINDSOR, COLORADO							
Recorded By A.STEERMAN							
Witnessed By JOSE							
Borehole Record		Tubing Record					
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size		Wgt/Ft	Top	Bottom		
Surface String	8.63"		24#	SURFACE	864'		
Prot. String							
Production String	5.5"		20#	SURFACE	8222'		
Liner							

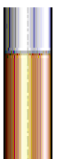
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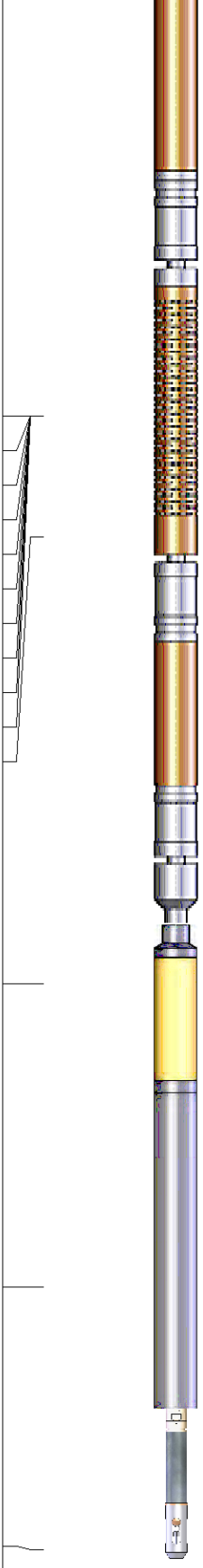
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Comments

RAN CEMENT BOND LOG TO VERIFY CEMENT  
WELL LOADED BEFORE ARRIVAL  
AIR IN FLUID FROM 740' TO SURFACE

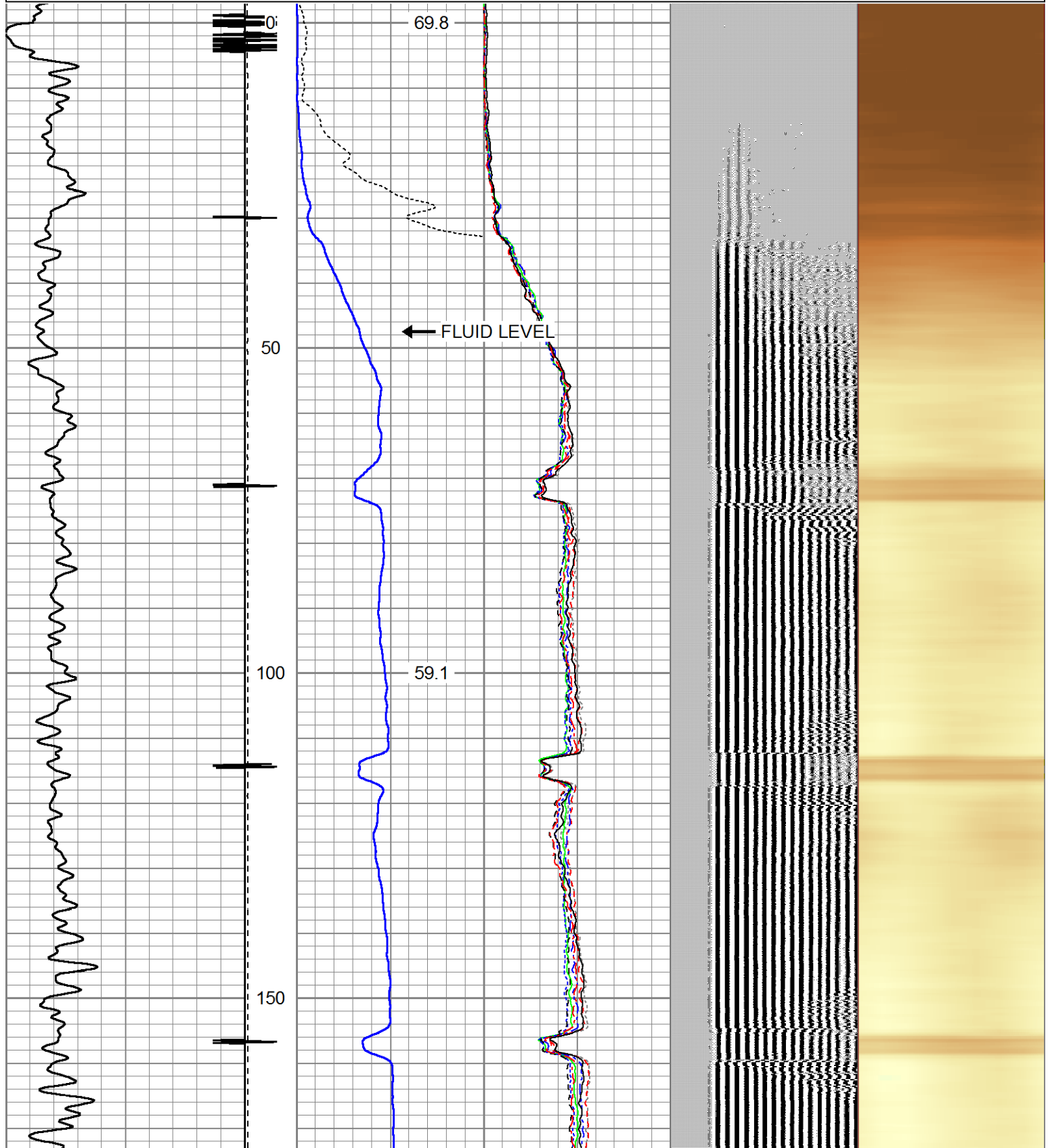
THANK YOU USING CUTTERS WIRELINE

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
						

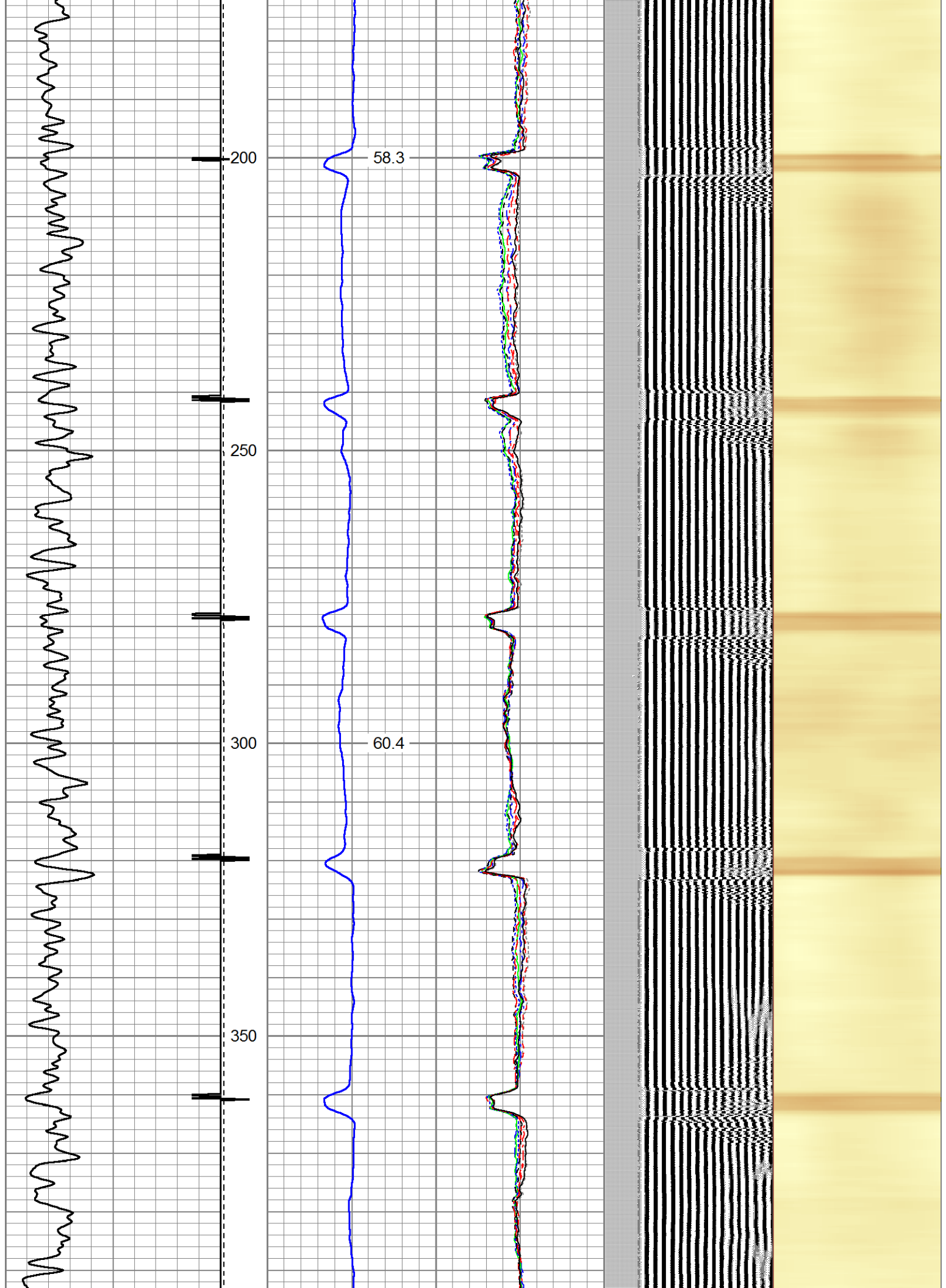
WVF3FT	9.44		8.75	2.75	90.00
WVFCAL	9.44				
WVFS1	9.44				
WVFS2	9.44				
WVFS3	9.44				
WVFS4	9.44				
WVFS5	9.44				
WVFS6	9.44				
WVFS7	9.44				
WVFS8	9.44				
WVF5FT	8.44				
CCL	4.75				
GR	2.25				
TEMP	0.08				
<div> <div> Dataset: Total Length: Total Weight: O.D. </div> <div> heit antone c #2.db: field/well/run1/pass5 14.00 ft 150.00 lb 2.75 in </div> </div>					

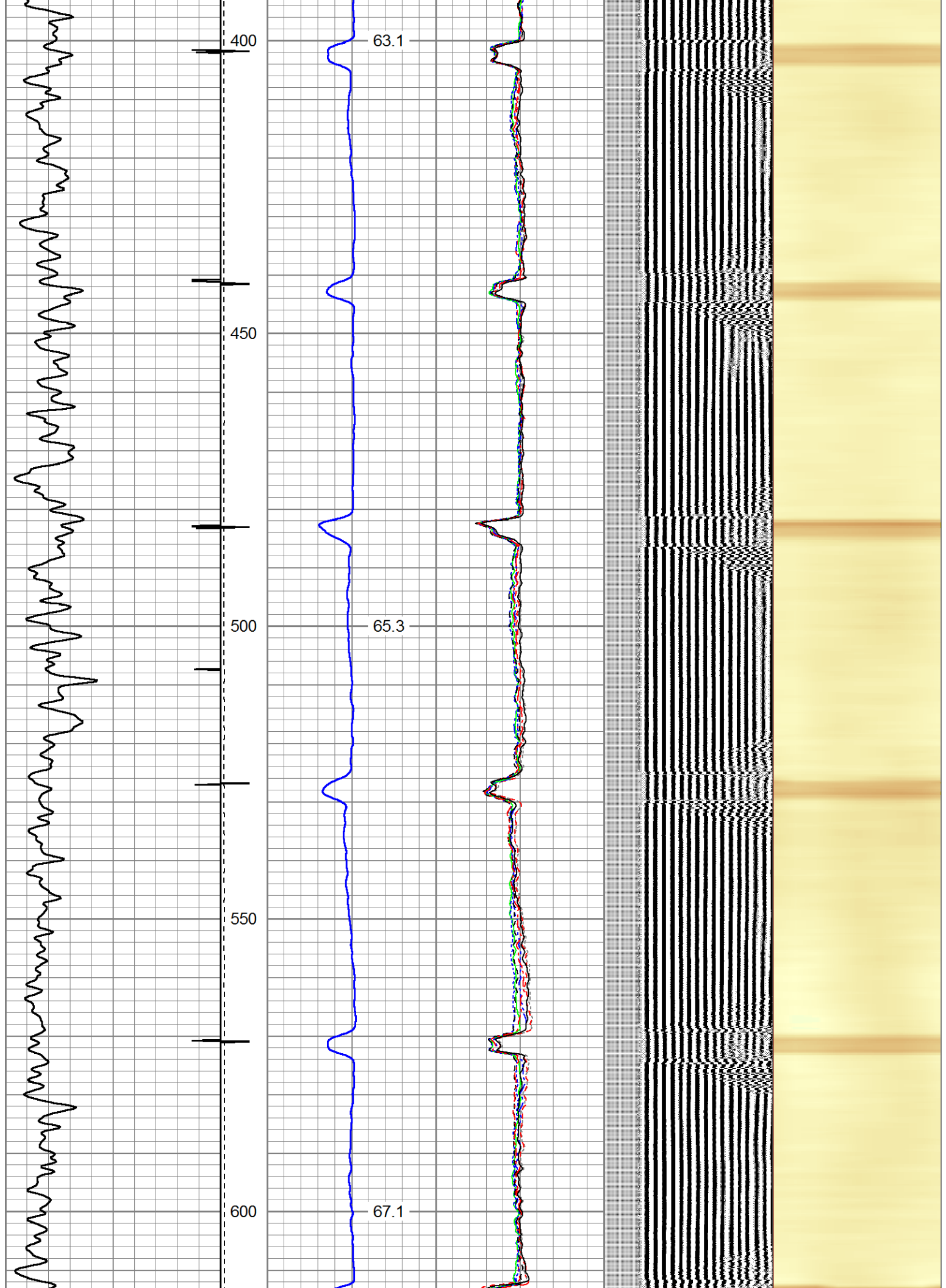
Database File: heit antone c #2.db  
 Dataset Pathname: pass5  
 Presentation Format: rbl55  
 Dataset Creation: Mon Jul 17 11:00:57 2017 by Log 7.0 B1  
 Charted by: Depth in Feet scaled 1:240

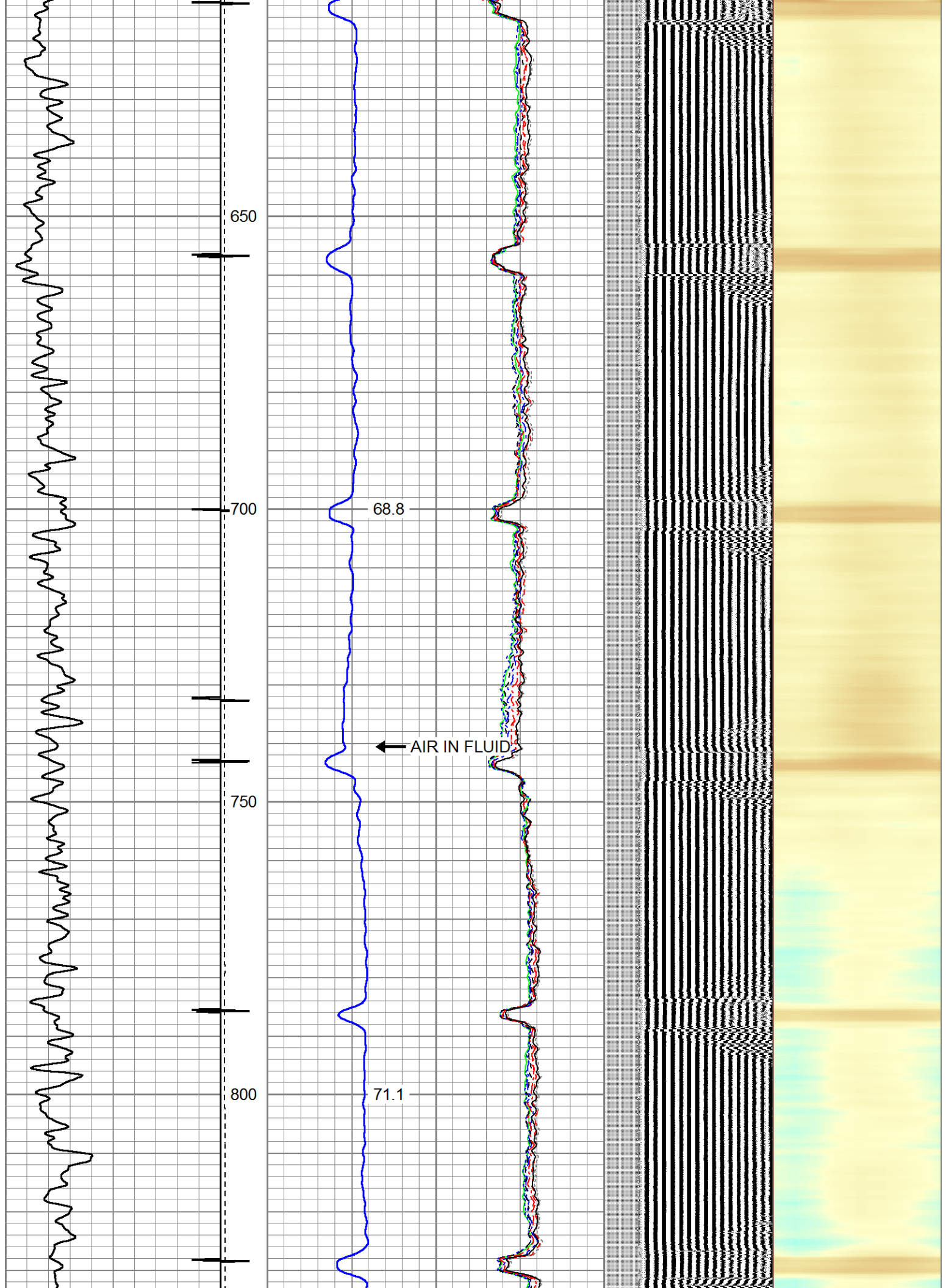
Charted by:		Depth in Feet scaled 1.240											
325	TT (usec)	225	LTEN	0	Amplitude (mV)	100	0	AMPS2	100	200	VDL	1200	Cement Map
0	GR (GAPI)	250	(lb)	0	Amplified Amplitude		0	AMPS3	100				
			CCL	0	(mV)	10	0	AMPS4	100				
					TEMP		0	AMPS5	100				
					(degF)		0	AMPS6	100				
							0	AMPS7	100				
							0	AMPS8	100				
							0	AMPS1	100				



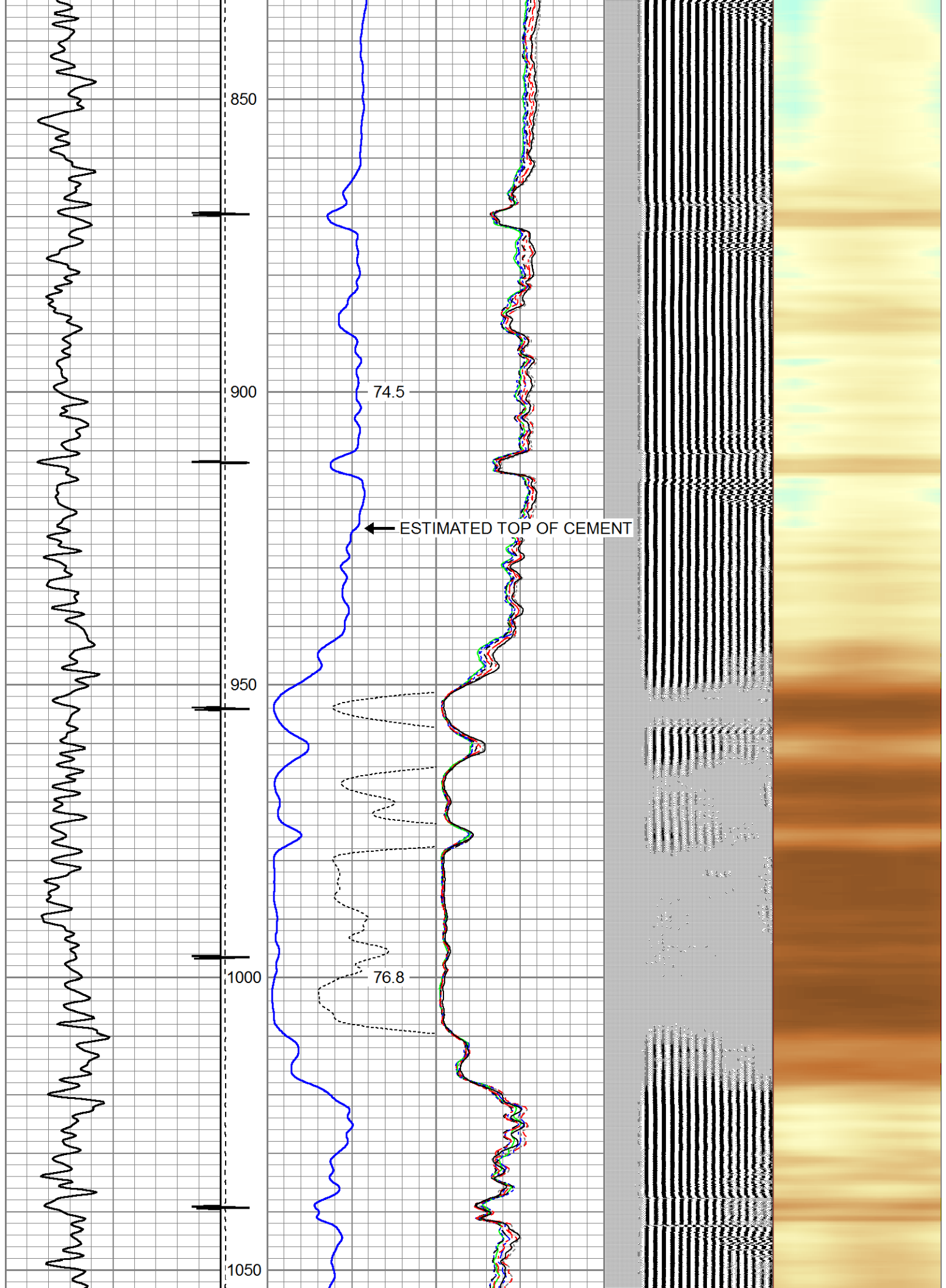


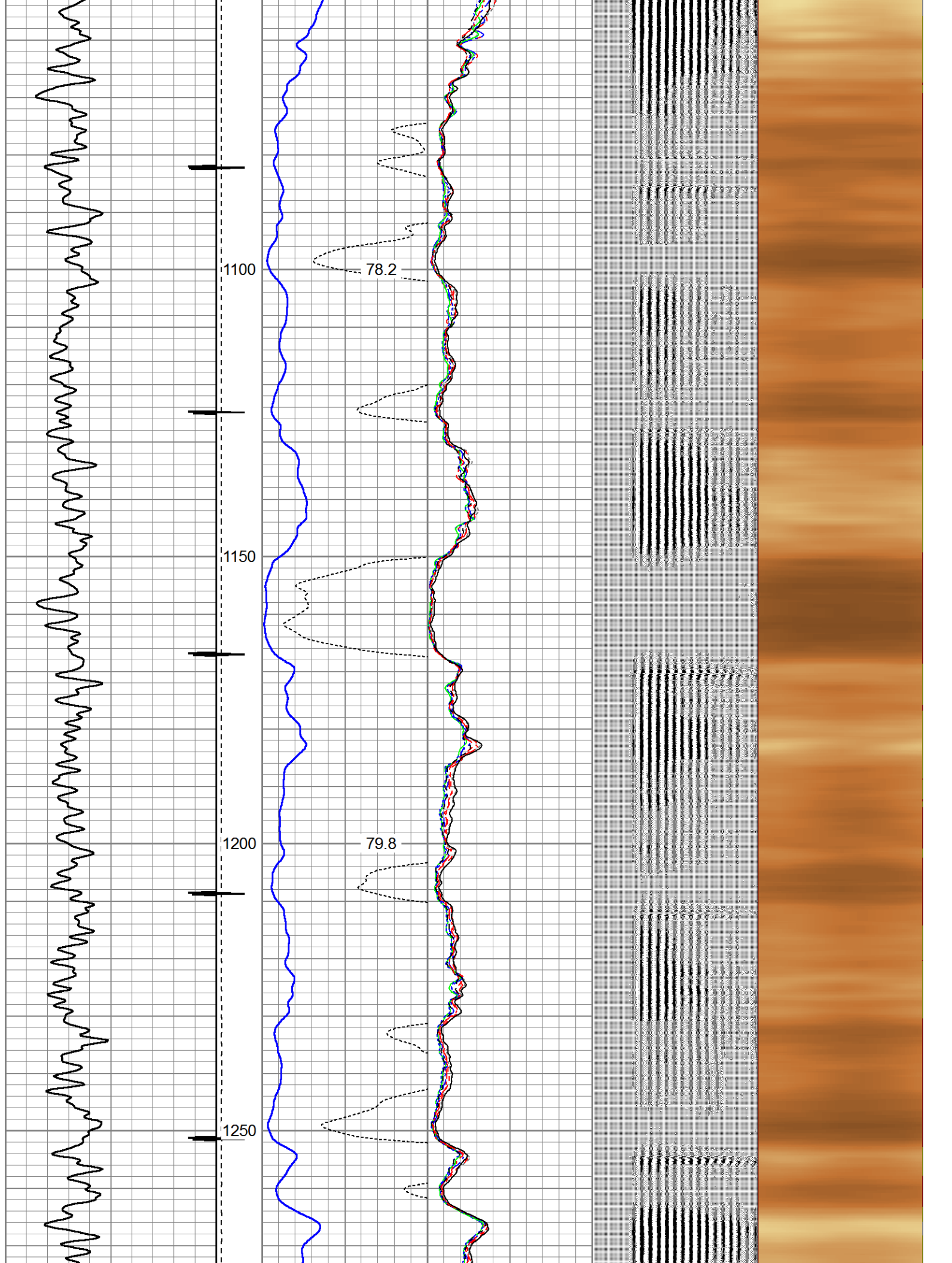


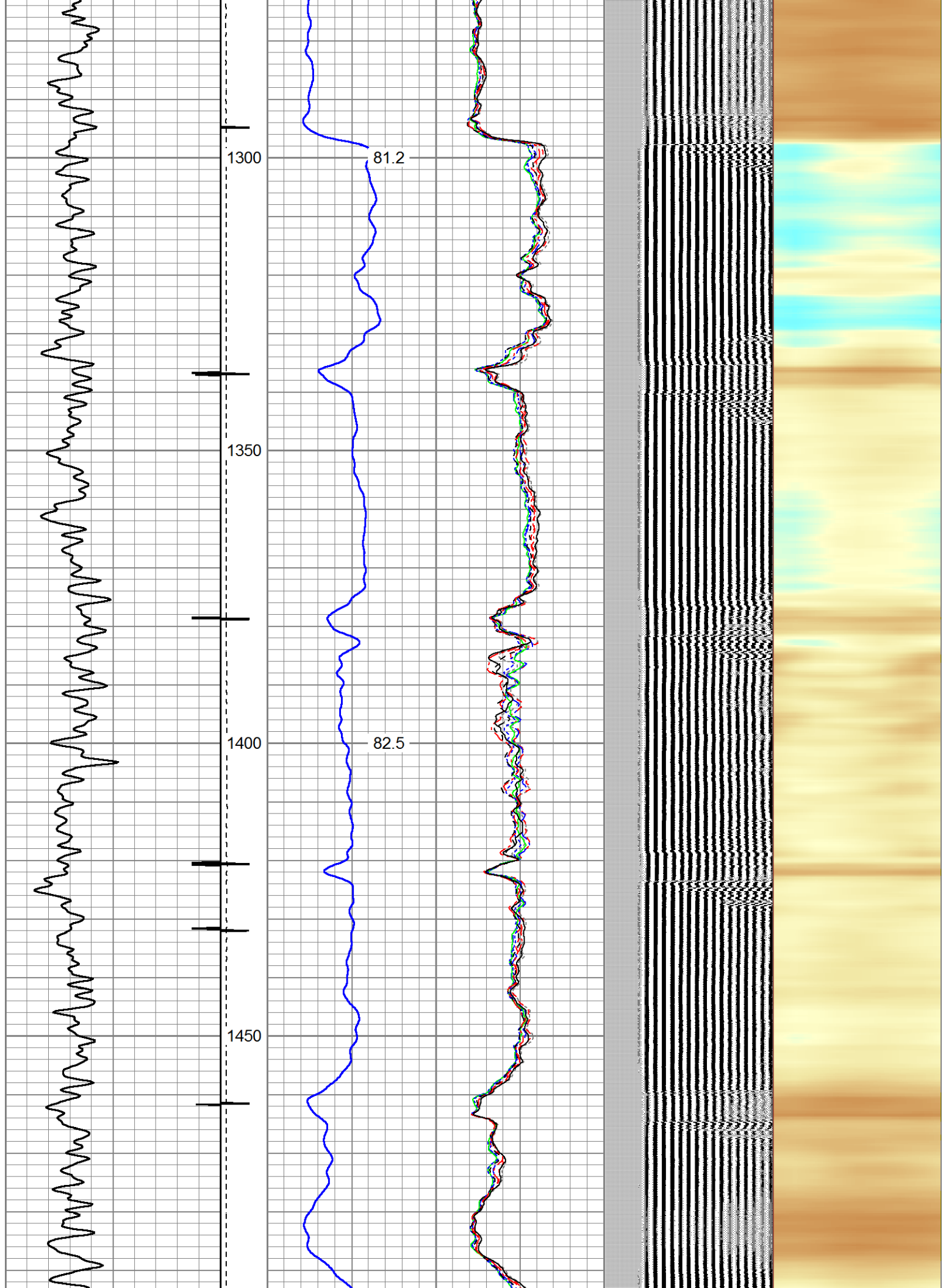




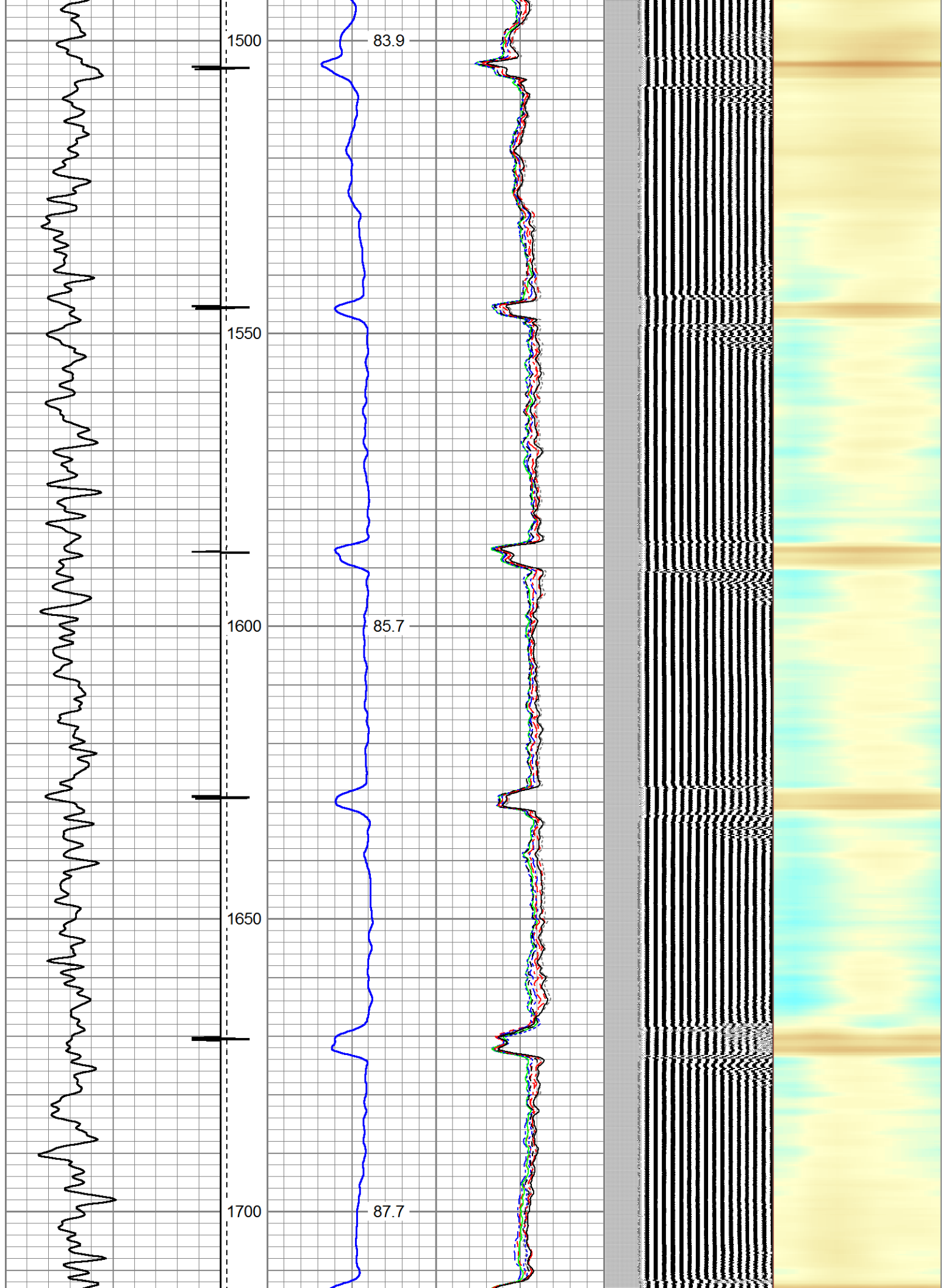


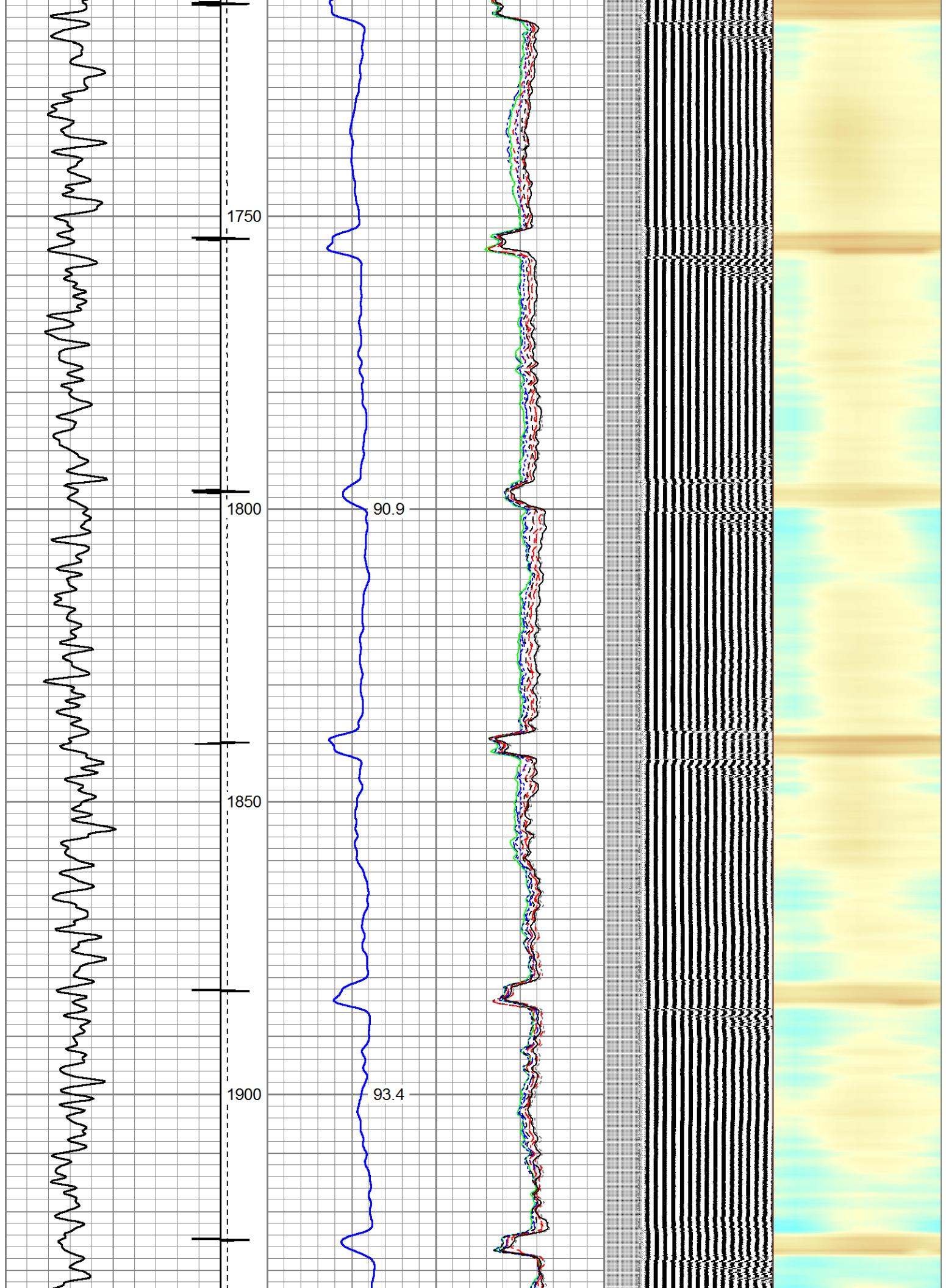


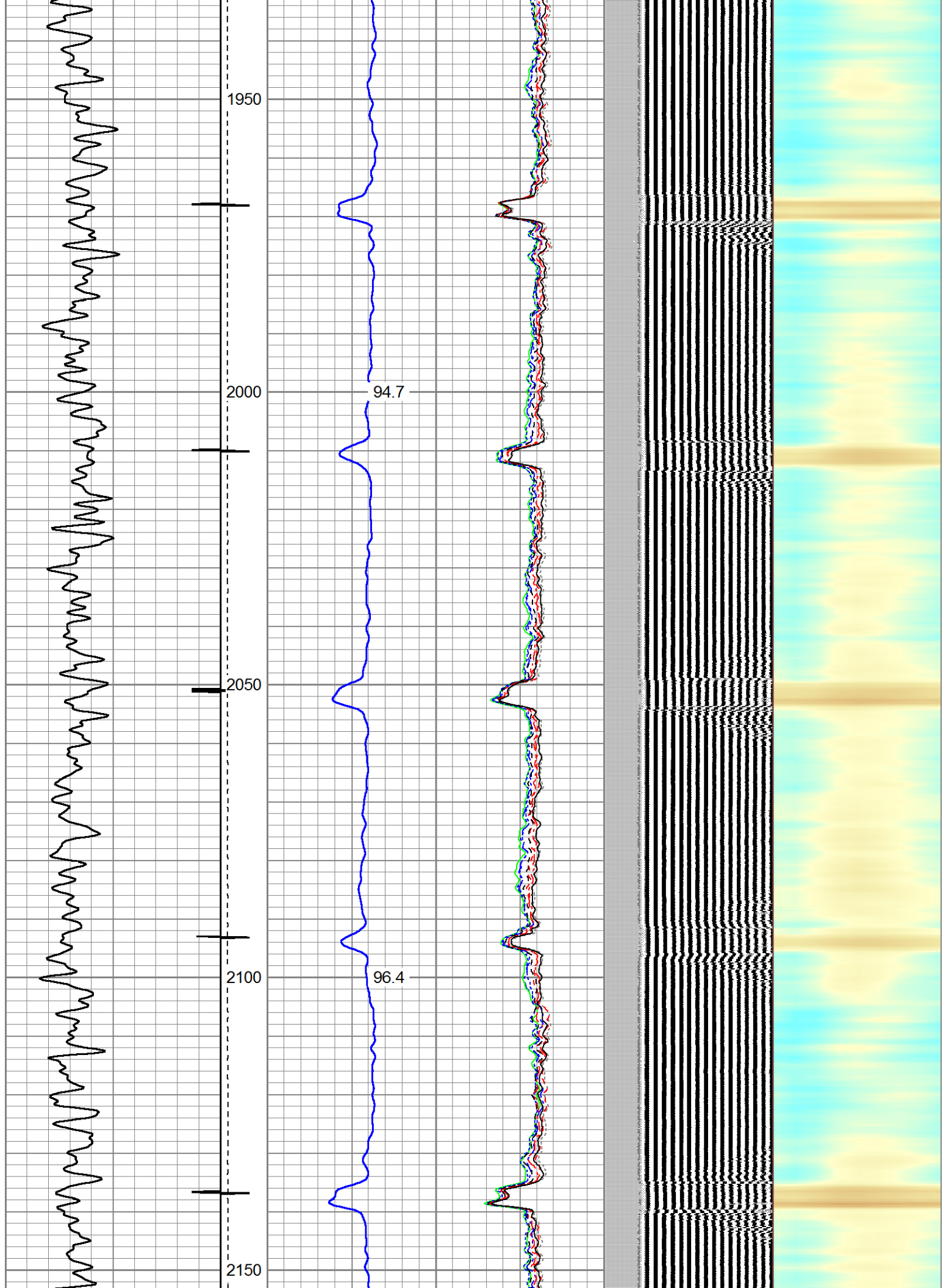




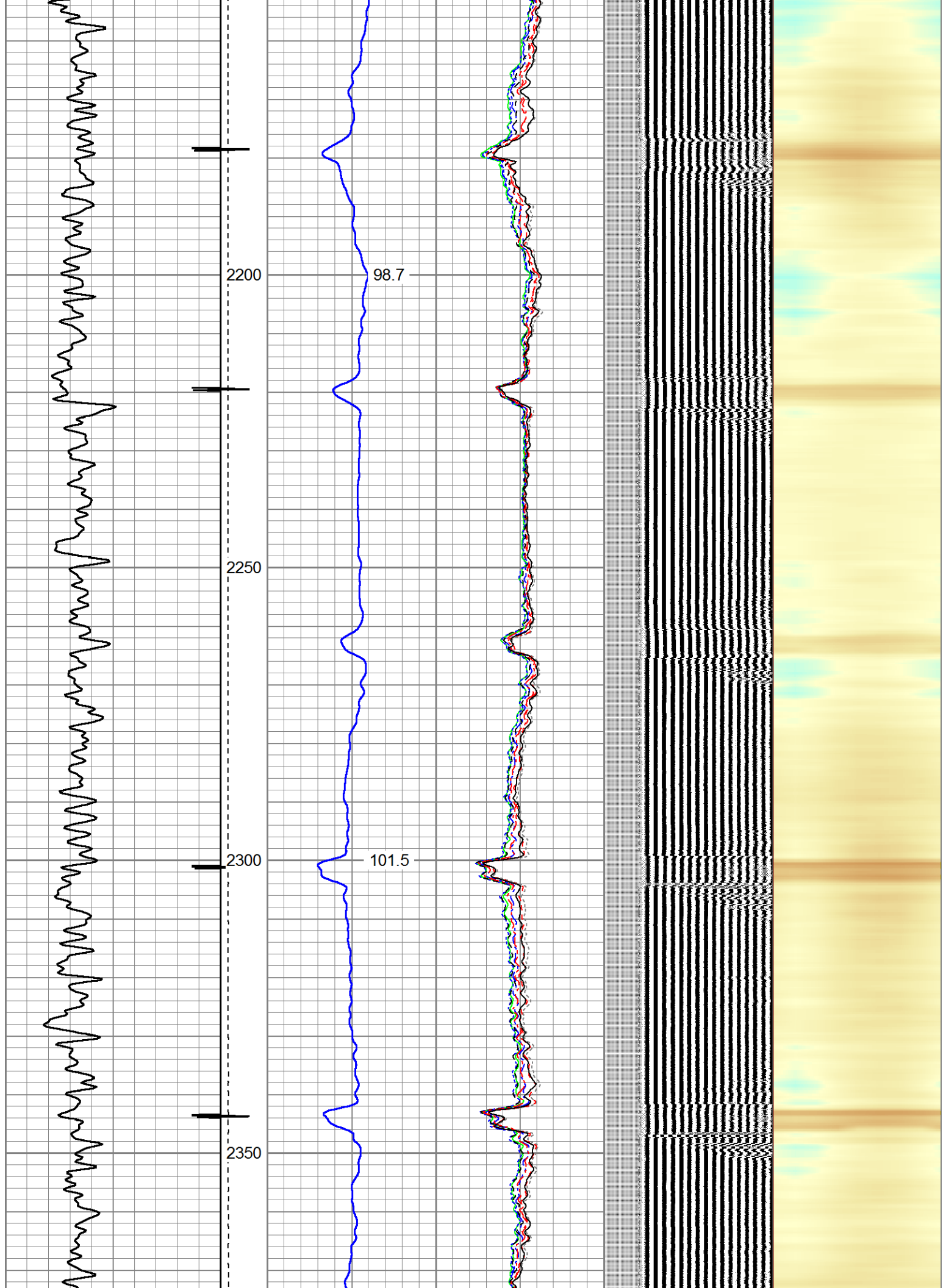


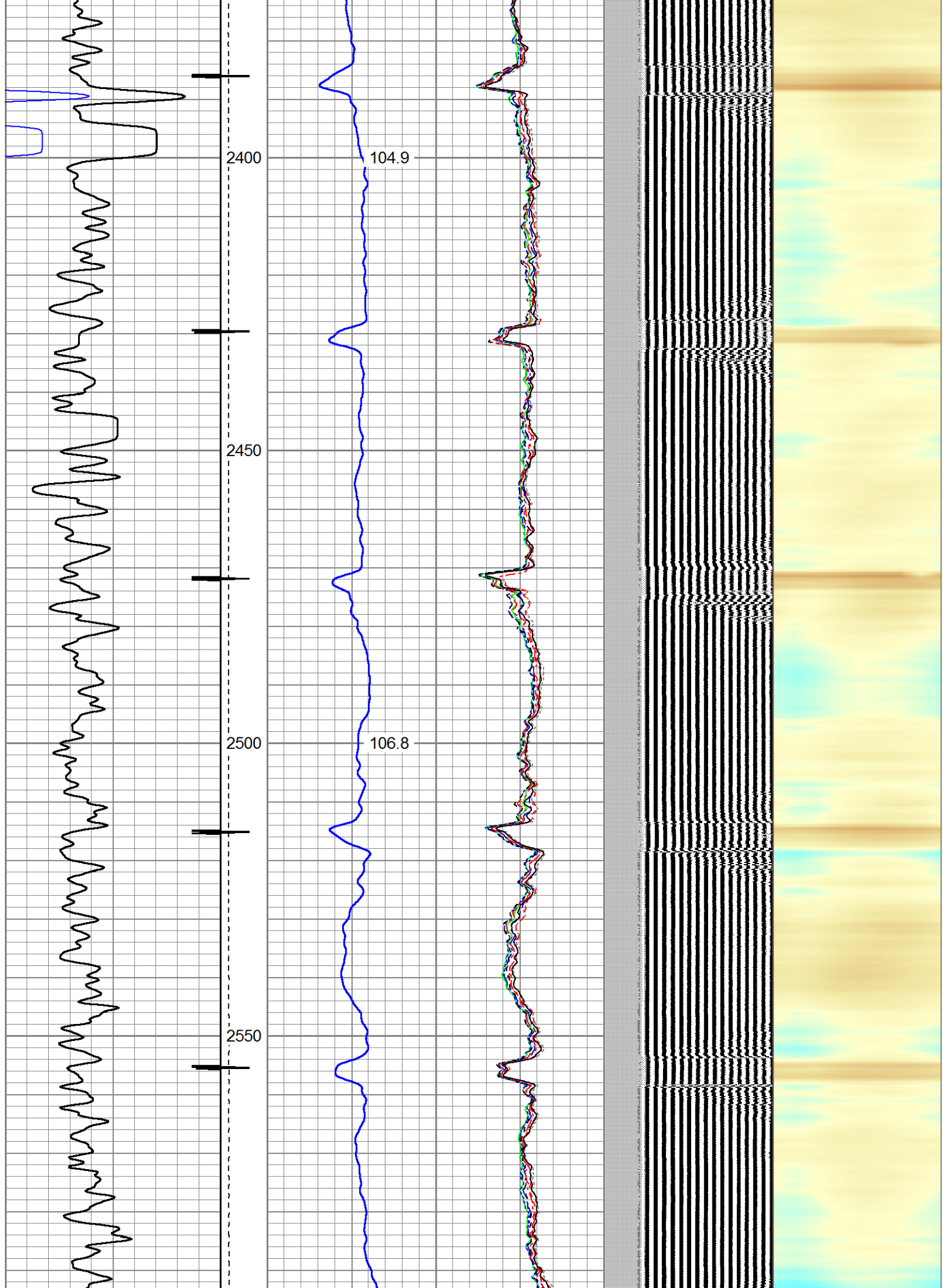


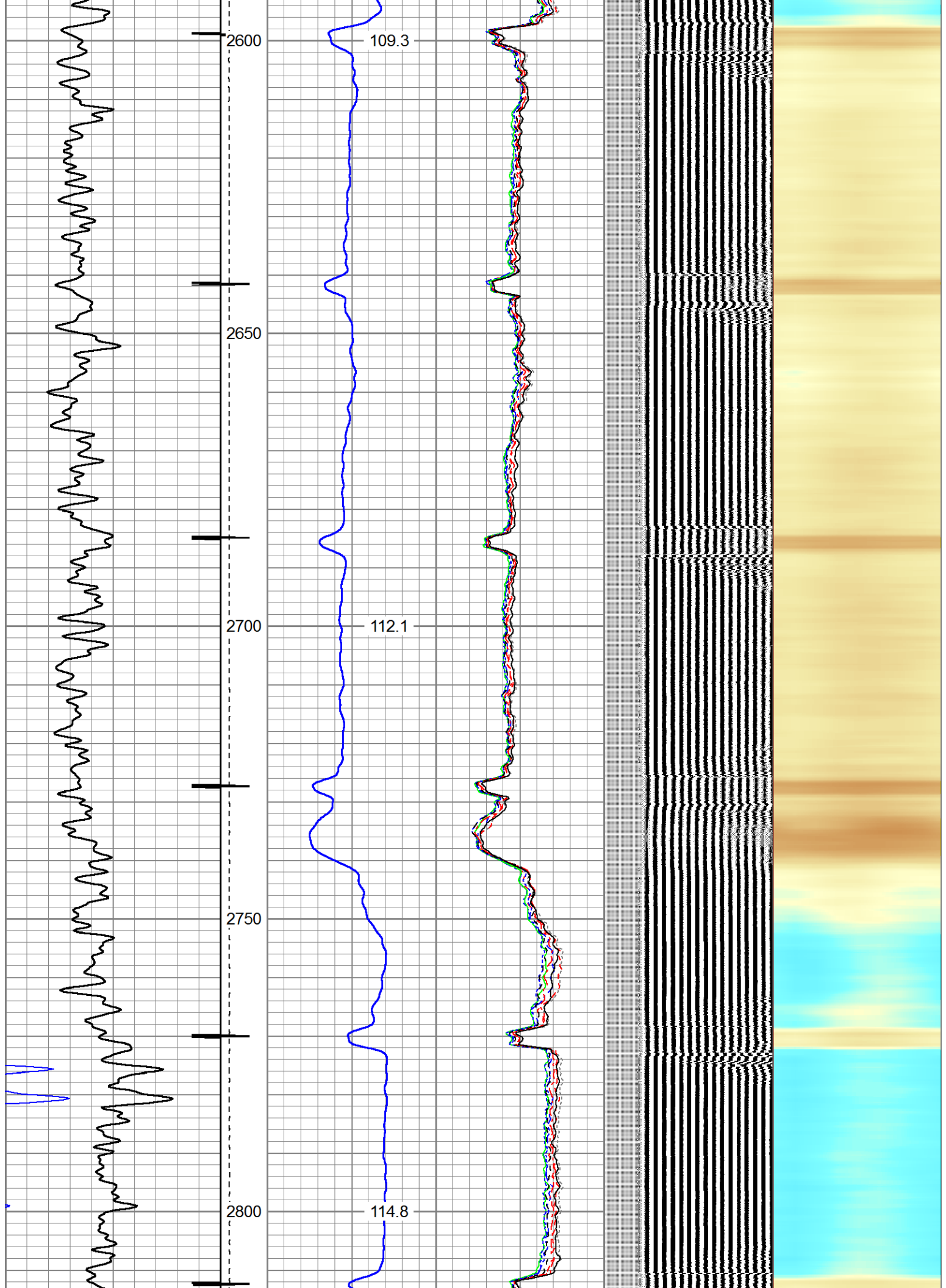




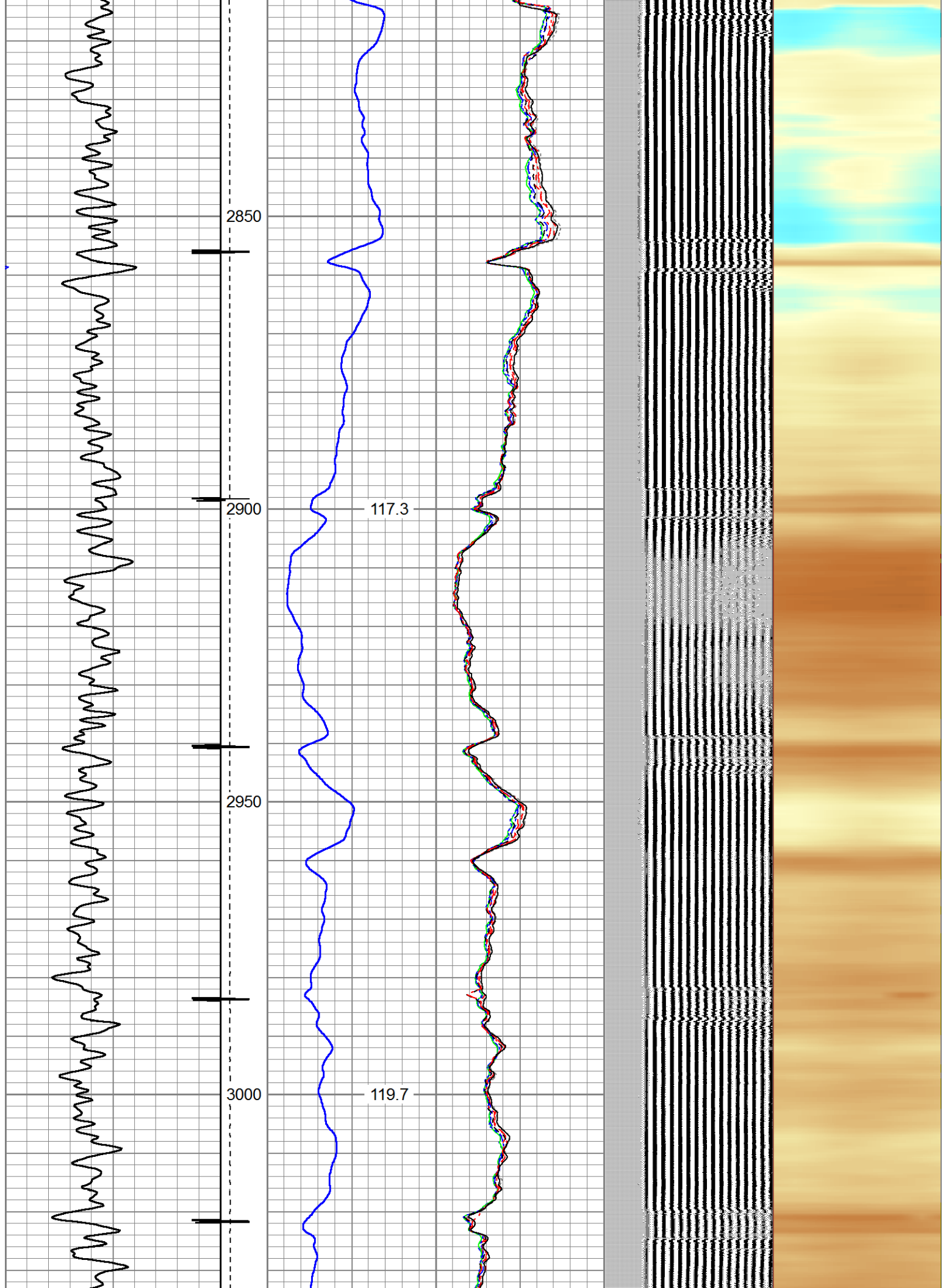


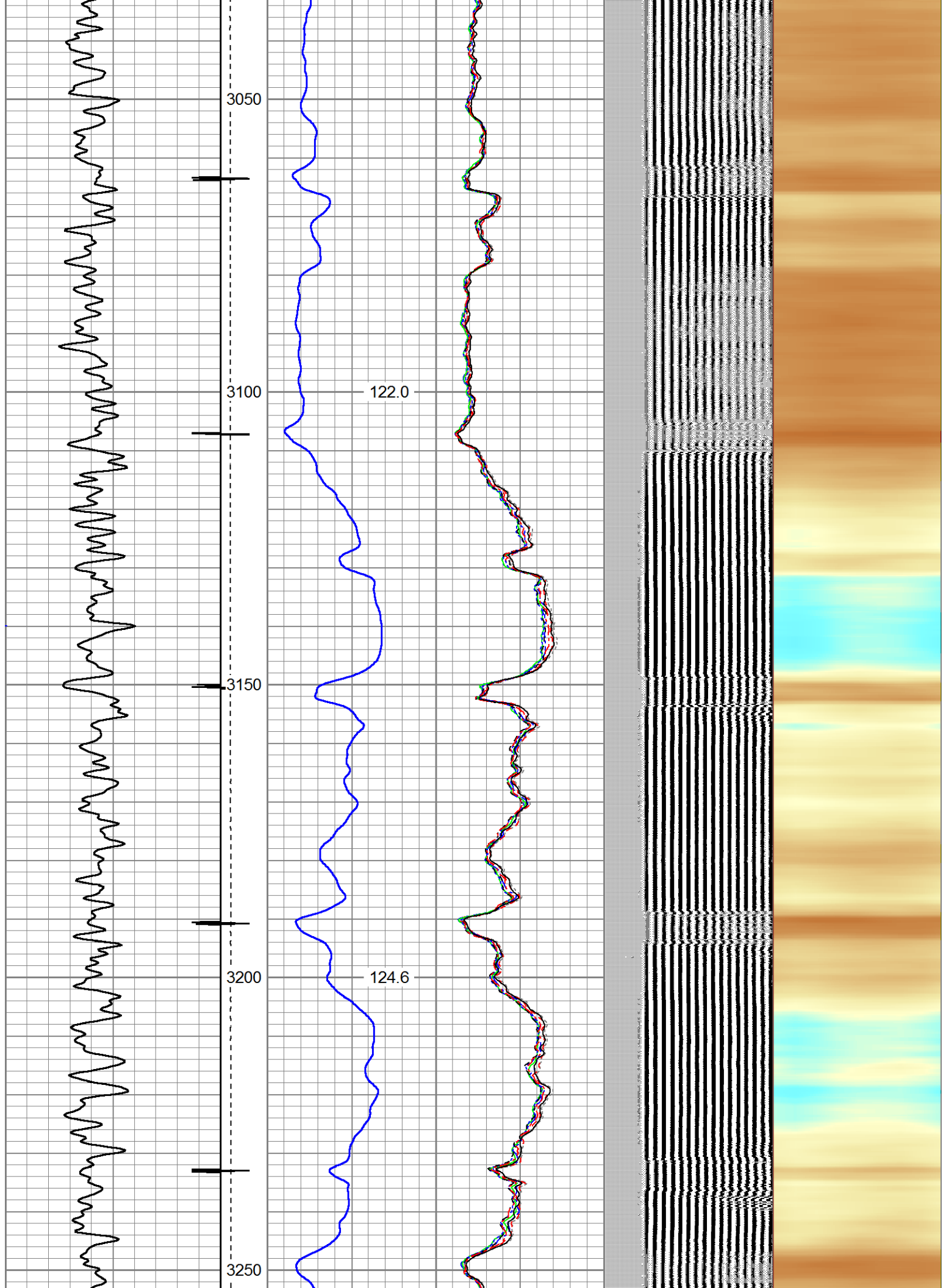


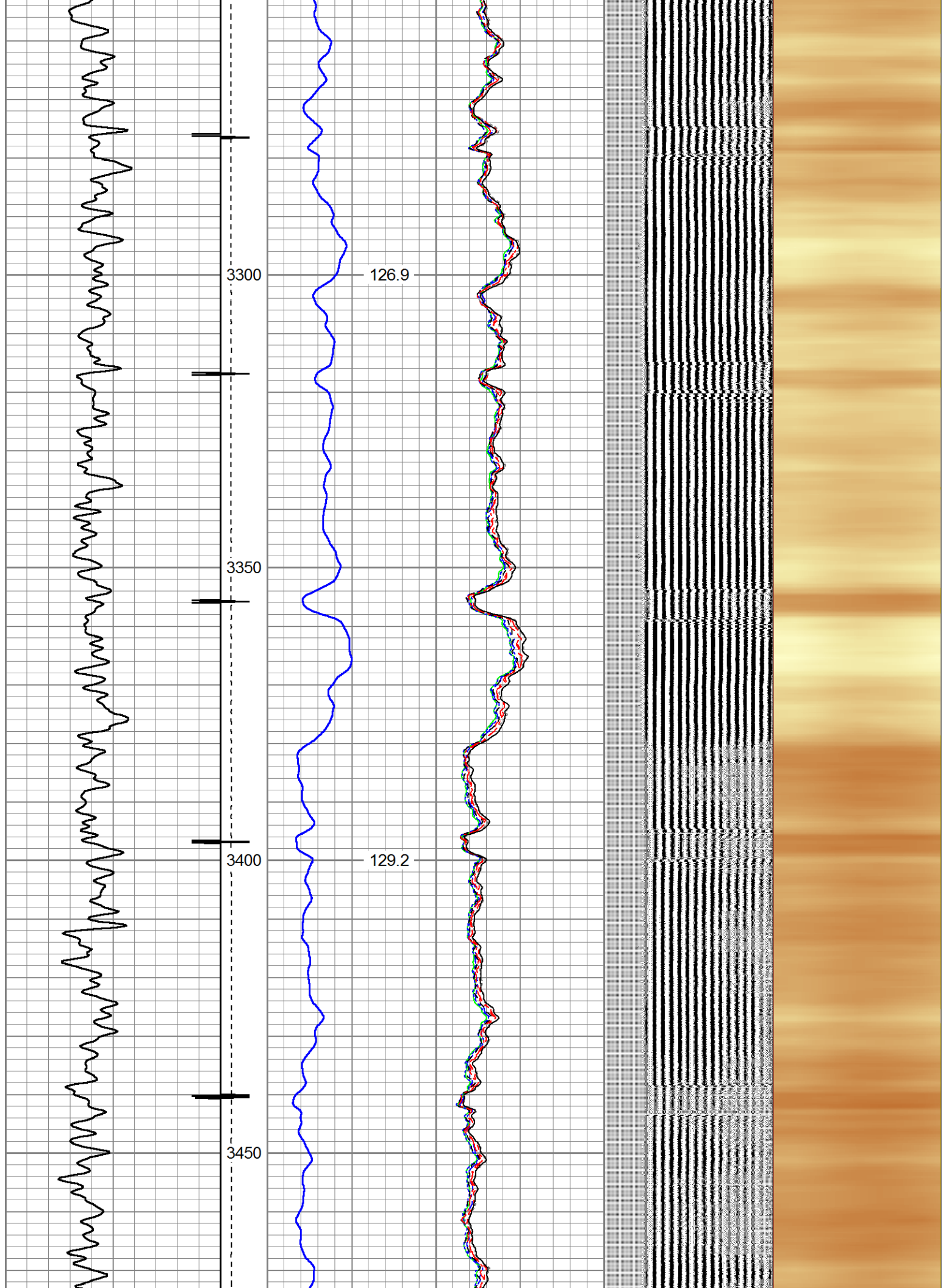




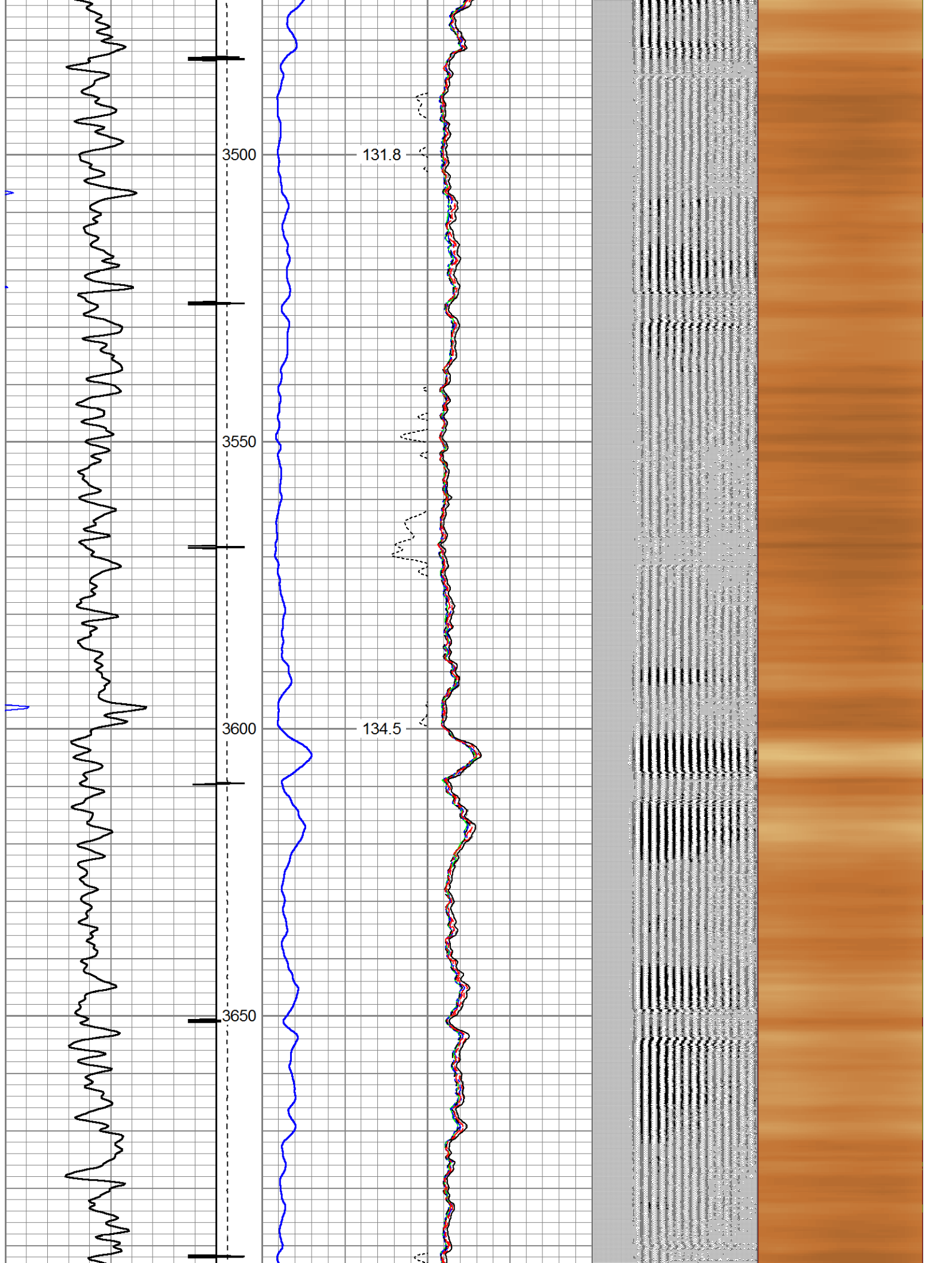


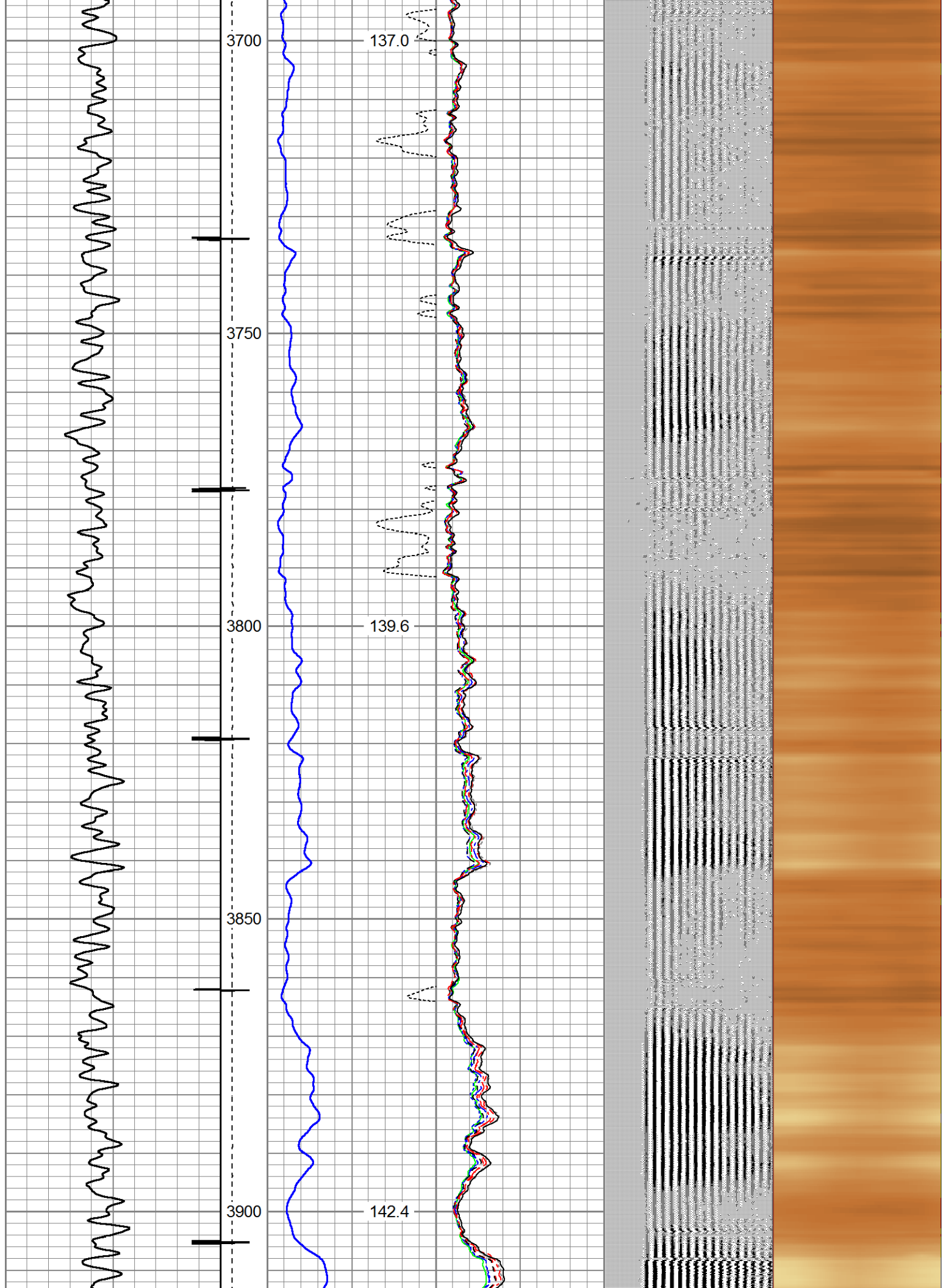


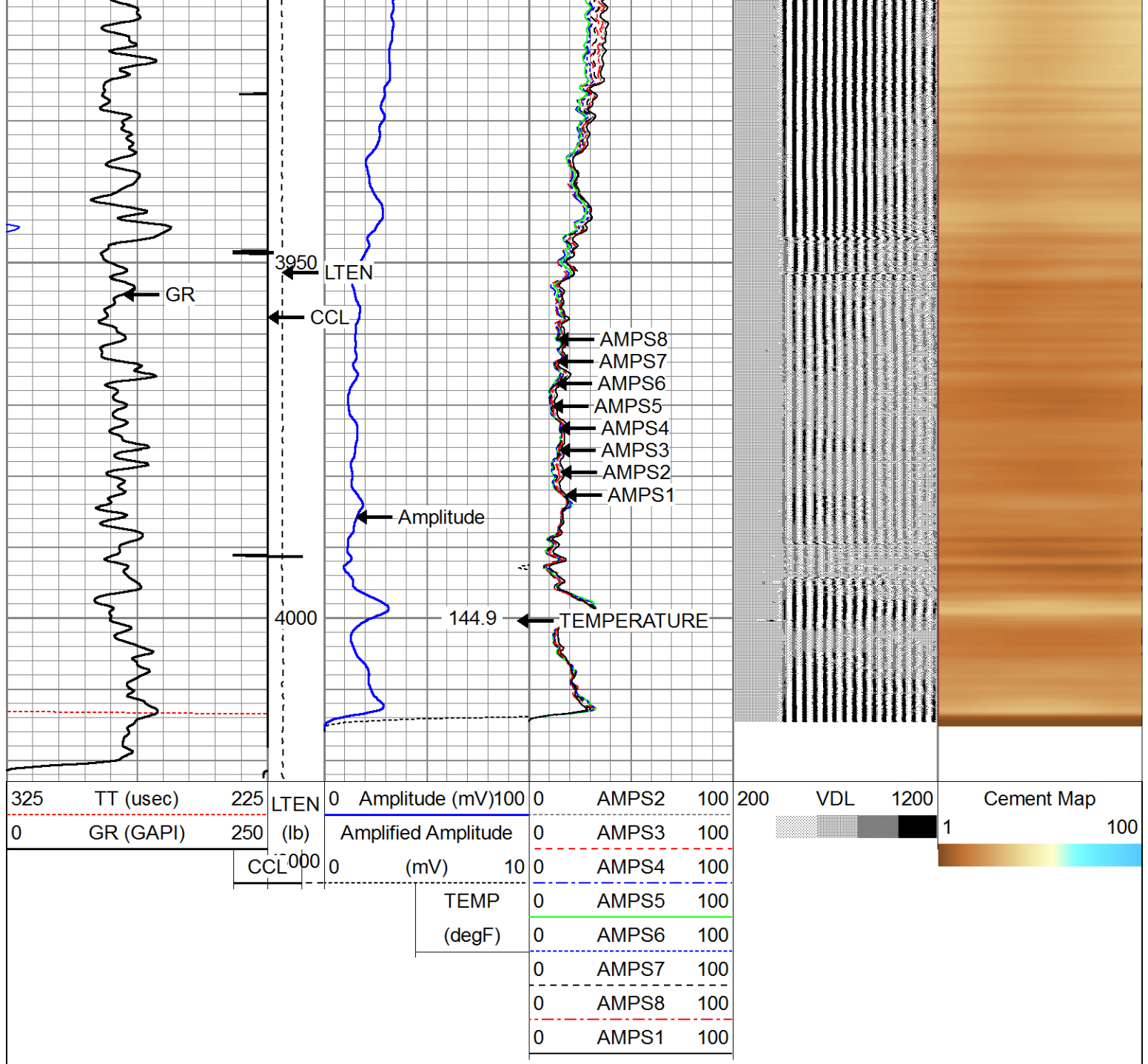












Company KERR-MCGEE OIL AND GAS  
Well HEIT ANTONE C UNIT 2  
Field WATTERBERG  
County WELD  
State CO





**PIONEER**

Pioneer Energy Services

**RADIAL BOND LOG  
WITH GAMMA RAY**

Comp. ANADARKO		Company <b>ANADARKO</b>	
Well HEIT, ANTONE C UNIT 2		Well <b>HEIT, ANTONE C UNIT 2</b>	
Field WATTENBERG		Field <b>WATTENBERG</b>	
Co. WELD		County <b>WELD</b>	
State COLORADO		State <b>COLORADO</b>	
Location: API #: 05-123-10846		Other Services	
LAT: 40.04110 LONG: -104.88150		NONE	
SEC 22 TWP 1N RGE 67W			
Permanent Datum	GL	Elevation	4997'
Log Measured From	KB	12'	Above Perm. Datum
Drilling Measured From	KB	K.B. 4997'	D.F. 4985'
Date of Service		JULY 06, 2017	
Run Number	ONE		
Depth Driller or PBTD	8222'		
Depth Logger	7970'		
Bottom Log Interval	7970'		
Top Log Interval	SURFACE		
Open Hole Size	7.875"		
Type Fluid	WATER		
Fluid Level	SURFACE		
Fluid Density	8.33		
Max. Recorded Temperature	NOT RECORDED		
Max. Wellhead Pressure	0 PSI		
Wellhead Connection	2-3/8" PACK OFF & SUB		
Estimated Cement Top	...		
Unit Number	P-38		
Wireline Size	9/32		
Location	FORT MORGAN CO		
Recorded By	PHIL LOPEZ		
Witnessed By	JOSE CASTILLO		
	Size	Wt/Ft	Top
Tubing Record			Bottom
Surface Casing	8.63"	24	SURFACE 864'
Production Casing	5.50"	20	SURFACE 8222'
Liner Record			

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Comments


N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.  
LOG NOT SET TO DEPTH. NO TIE IN LOGS ON LOCATION


THANK YOU FOR USING PIONEER ENERGY SERVICES!

Your Pioneer Energy Services Crew	Tool Data - Services	Serial Number
Engineer: PHIL LOPEZ	SCBL	RBL D 070151
Operator: DEAN MARSHALL	GAMMA-RAY	035-GR275-T035
Operator: ERIC ENGLE		
Operator:		

Top - Bottom

BHTEMP_Src	PPT usec	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	SRFTEMP degF	CASETHCK in
TEMP	0	20	0	1	0.08	0	0
CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in			
5.5	0	0	200	7.875			

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
TEMP	14.17		Cable Head-Titan 143 1 7/16" Titan Cable Head	1.03	1.43	2.00
			Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00
WVFS8	11.94		SCBL-275 Probe w Temp New Mod (141169.17) Probe Radii Bond Tool with Temperature	1169.17	2.75	95.00
WVFS7	11.94					
WVFS6	11.94					
WVFS5	11.94					
WVFS4	11.94					
WVFS3	11.94					
WVFS2	11.94					
WVFS1	11.94					
WVFCAL	11.94					
WVF3FT	11.94					
WVF5FT	10.94					
HEADVOLT	7.69					
CCL	3.91		Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00

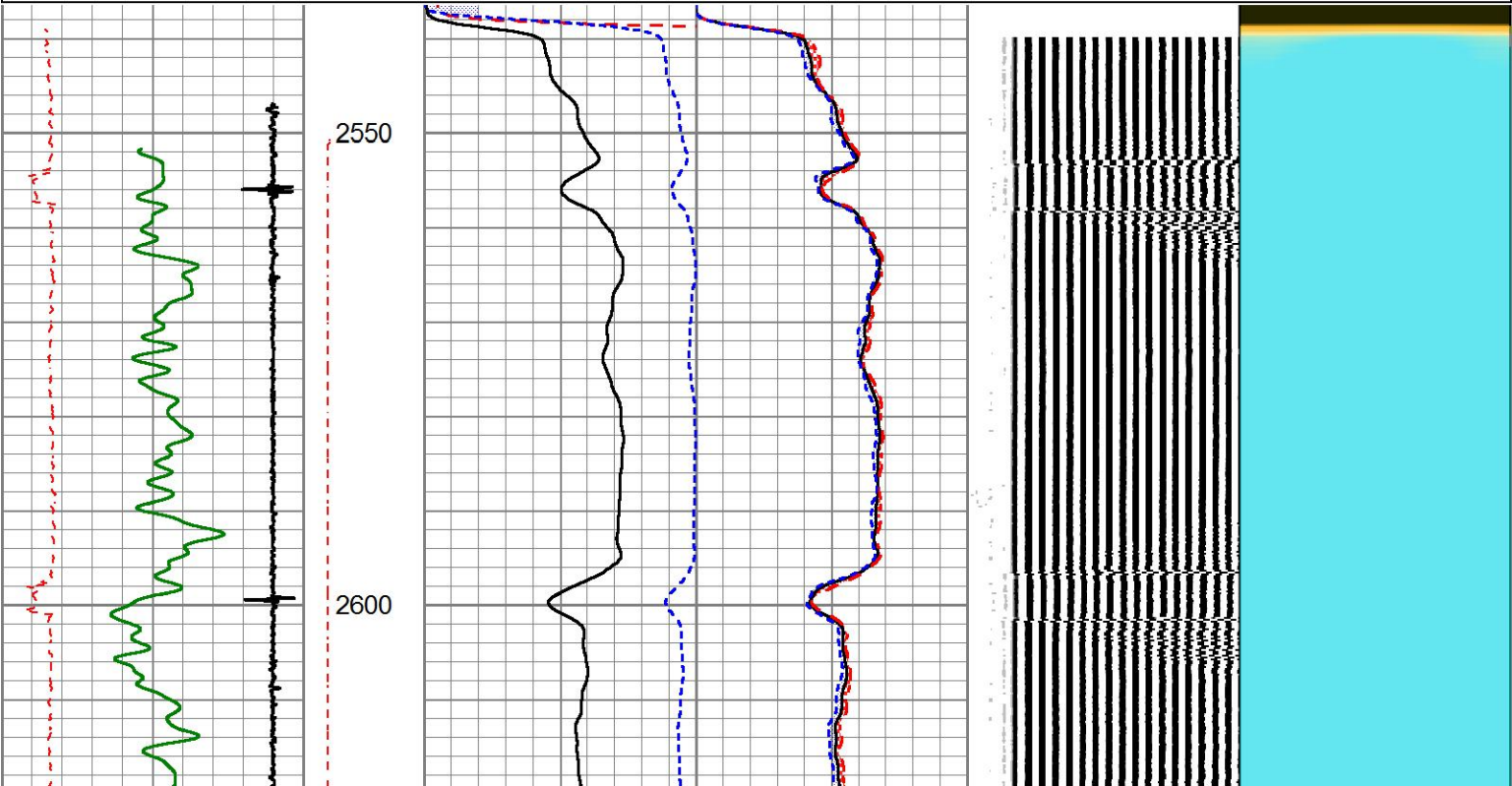
GR	1.17		GR_CCL-275 Probe GR-CCL Corrosion (F4.54:12-242.75 Probe 2 3/4" Gamma Ray / CCL Corrosion Digital			60.00
			Bullnose-Titan GO Pin Pressure Cap	0.27	1.38	1.00
Dataset: anadarko_heit, antone c unit 2_20170706.db: field/well/run1/pass6 Total length: 20.76 ft Total weight: 188.00 lb O.D.: 2.75 in						



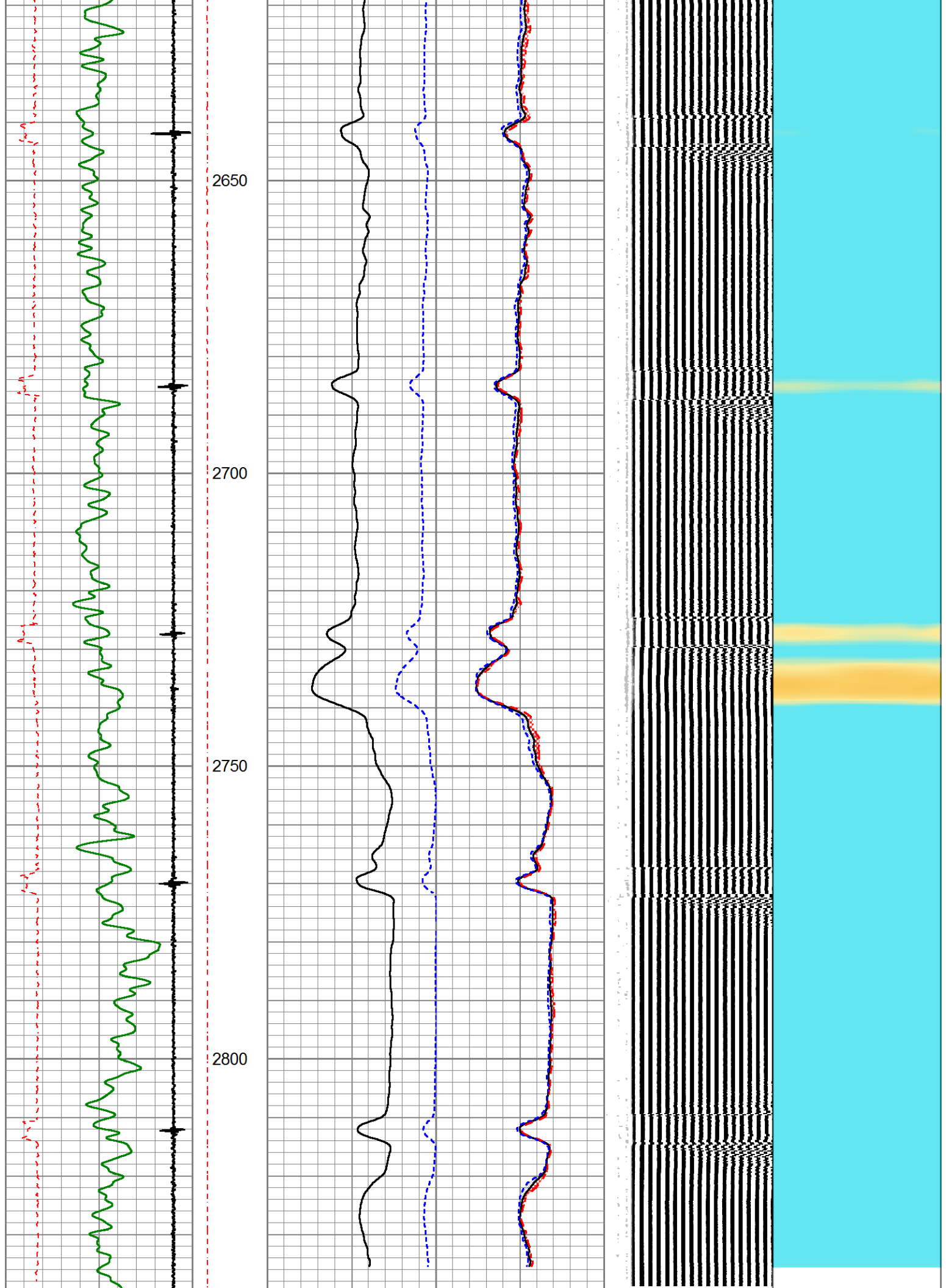
# FREE PIPE PASS

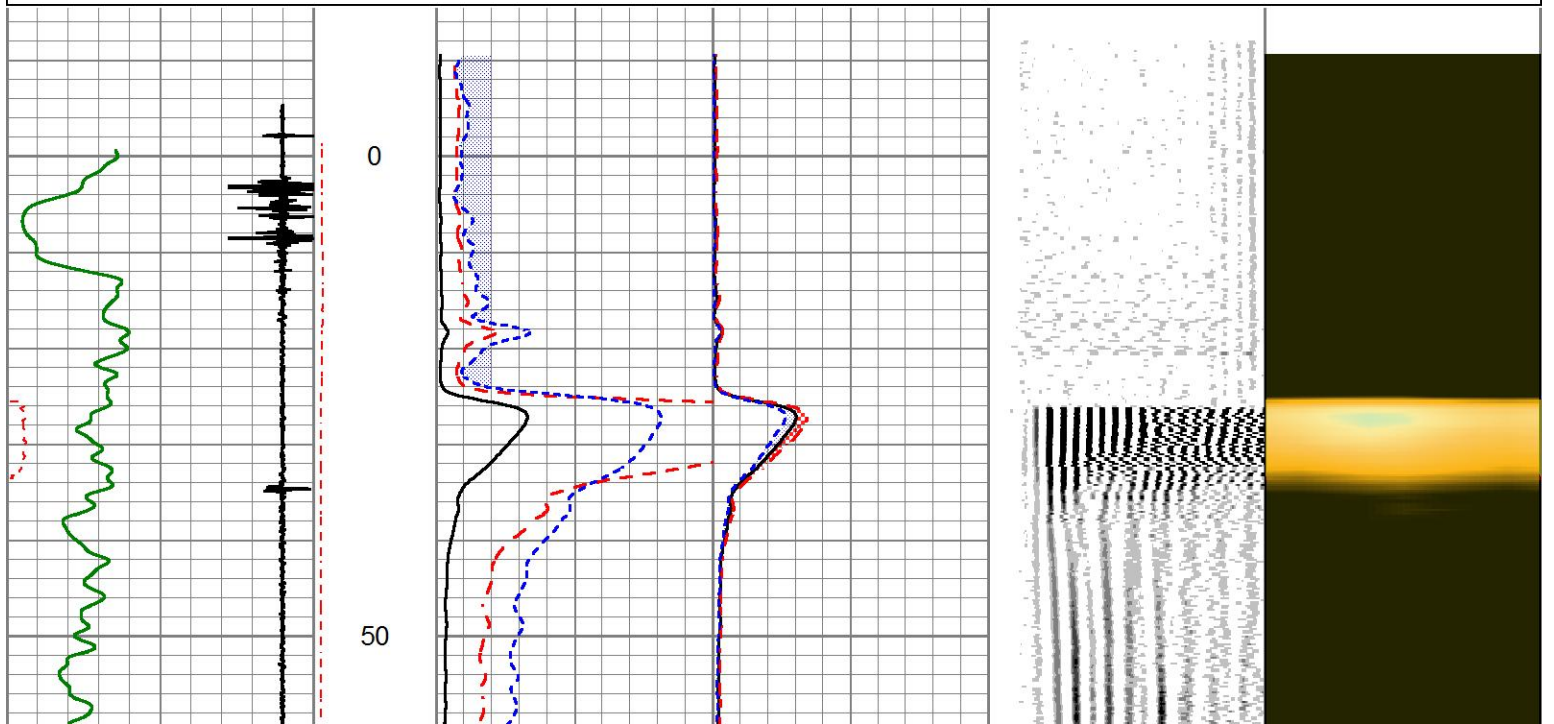
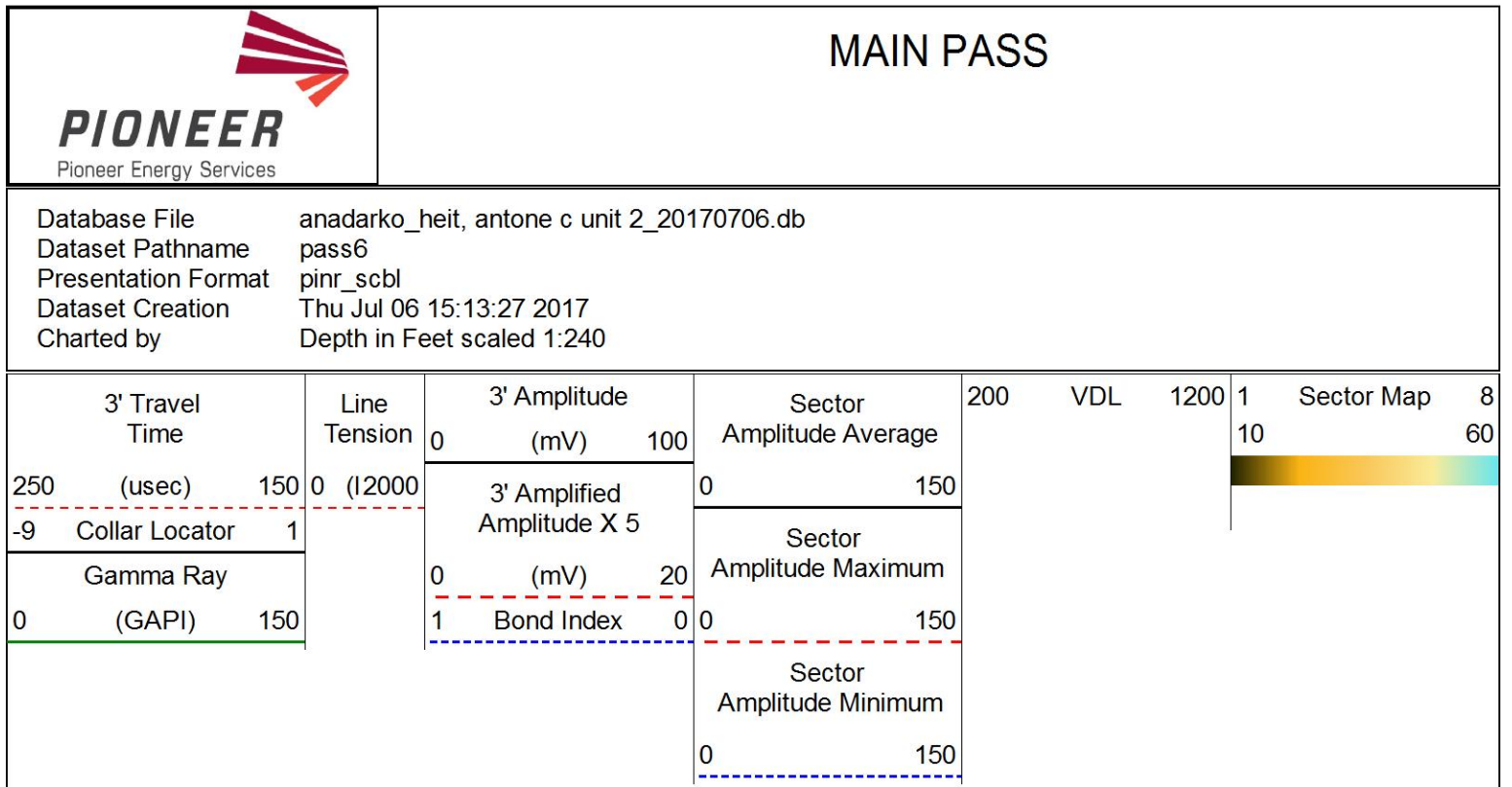
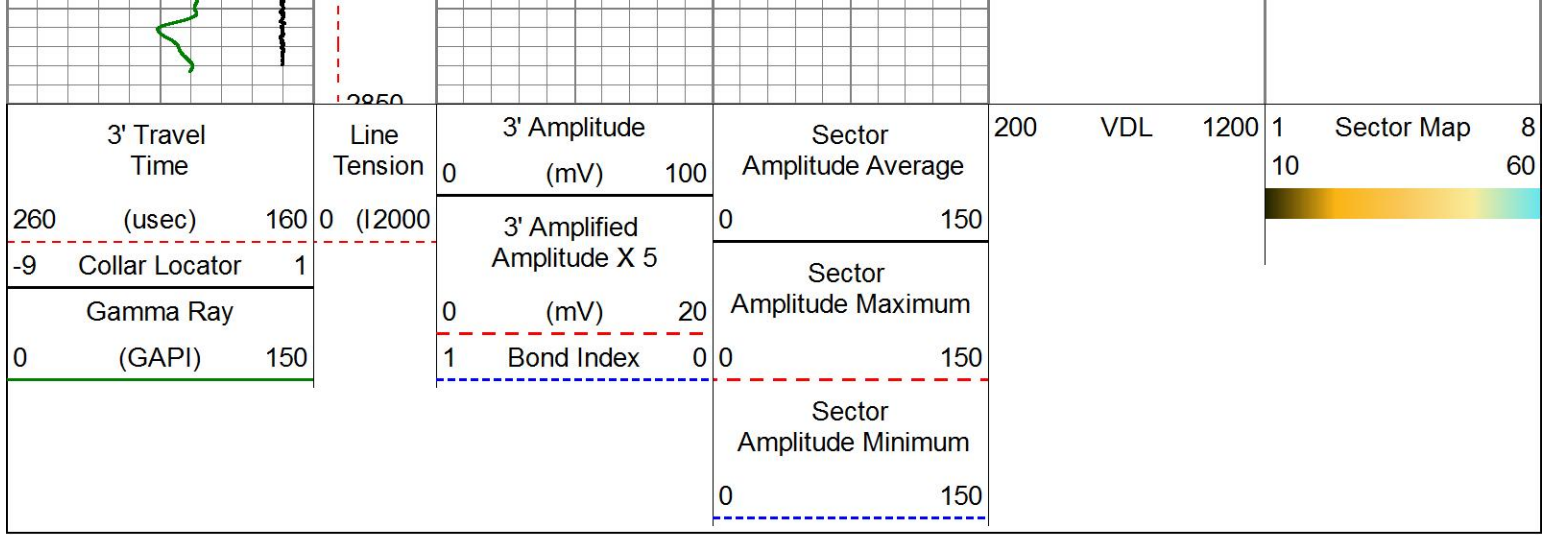
Database File	anadarko_heit, antone c unit 2_20170706.db
Dataset Pathname	pass2
Presentation Format	pinr_scbl
Dataset Creation	Thu Jul 06 14:35:20 2017
Charted by	Depth in Feet scaled 1:240

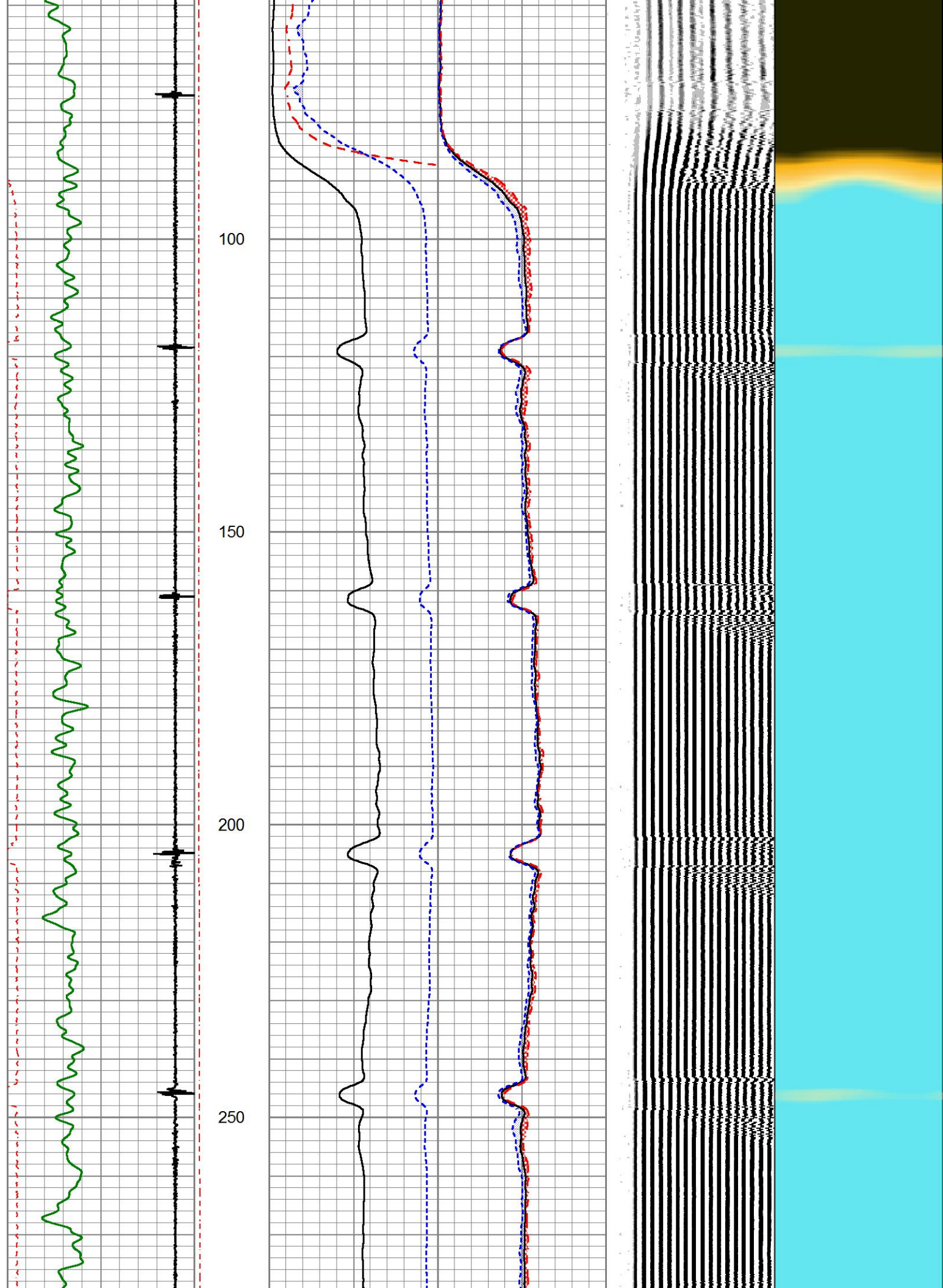
3' Travel Time			Line Tension	3' Amplitude		Sector Amplitude Average	200	VDL	1200	1	Sector Map	8
		0		(mV)	100							
260	(usec)	160	3' Amplified Amplitude X 5		0	150						
-9 Collar Locator 1												
Gamma Ray			0 (mV) 20		Sector Amplitude Maximum							
0 (GAPI) 150			1 Bond Index 0		0 150							
					Sector Amplitude Minimum							
					0 150							



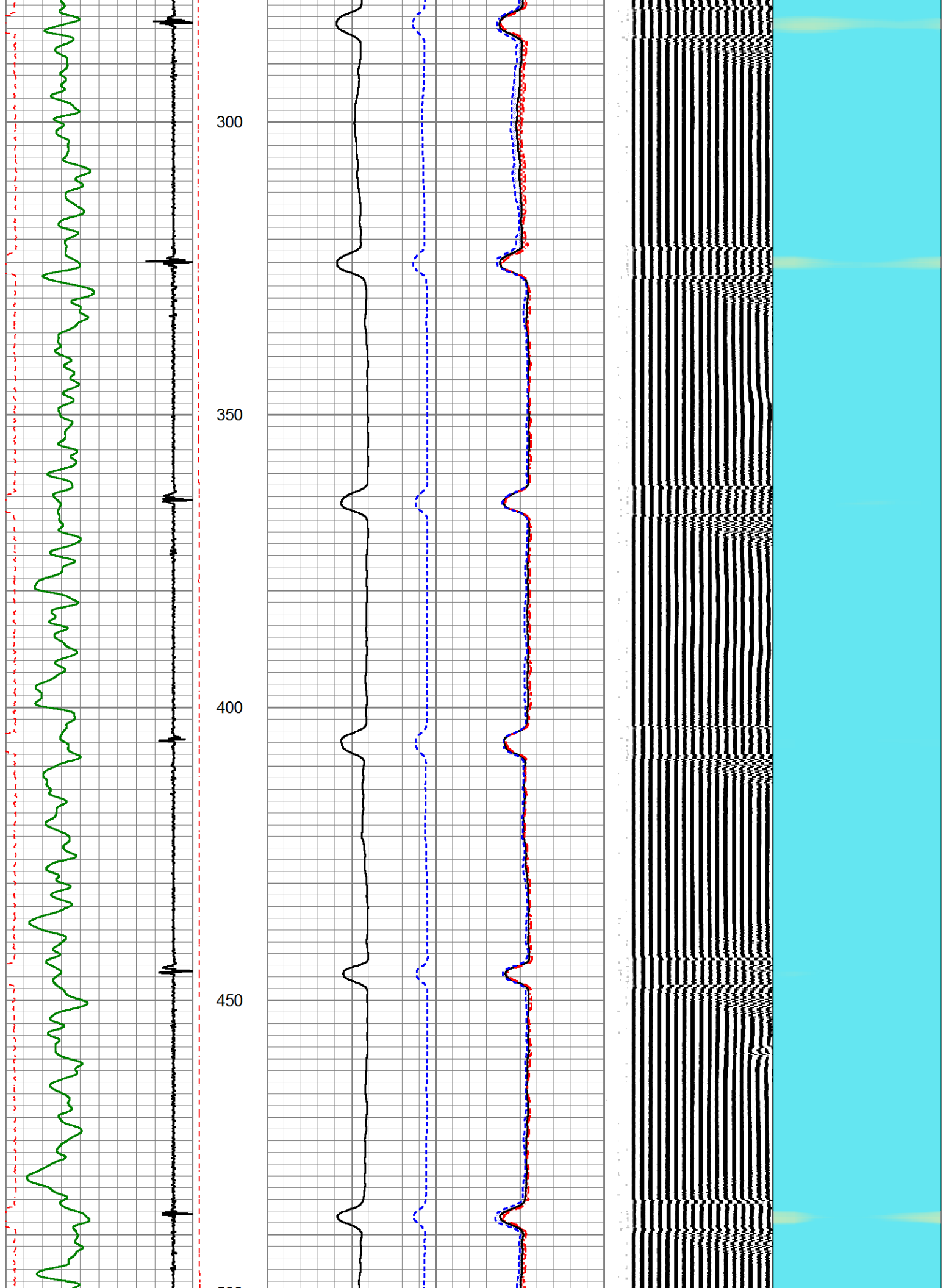




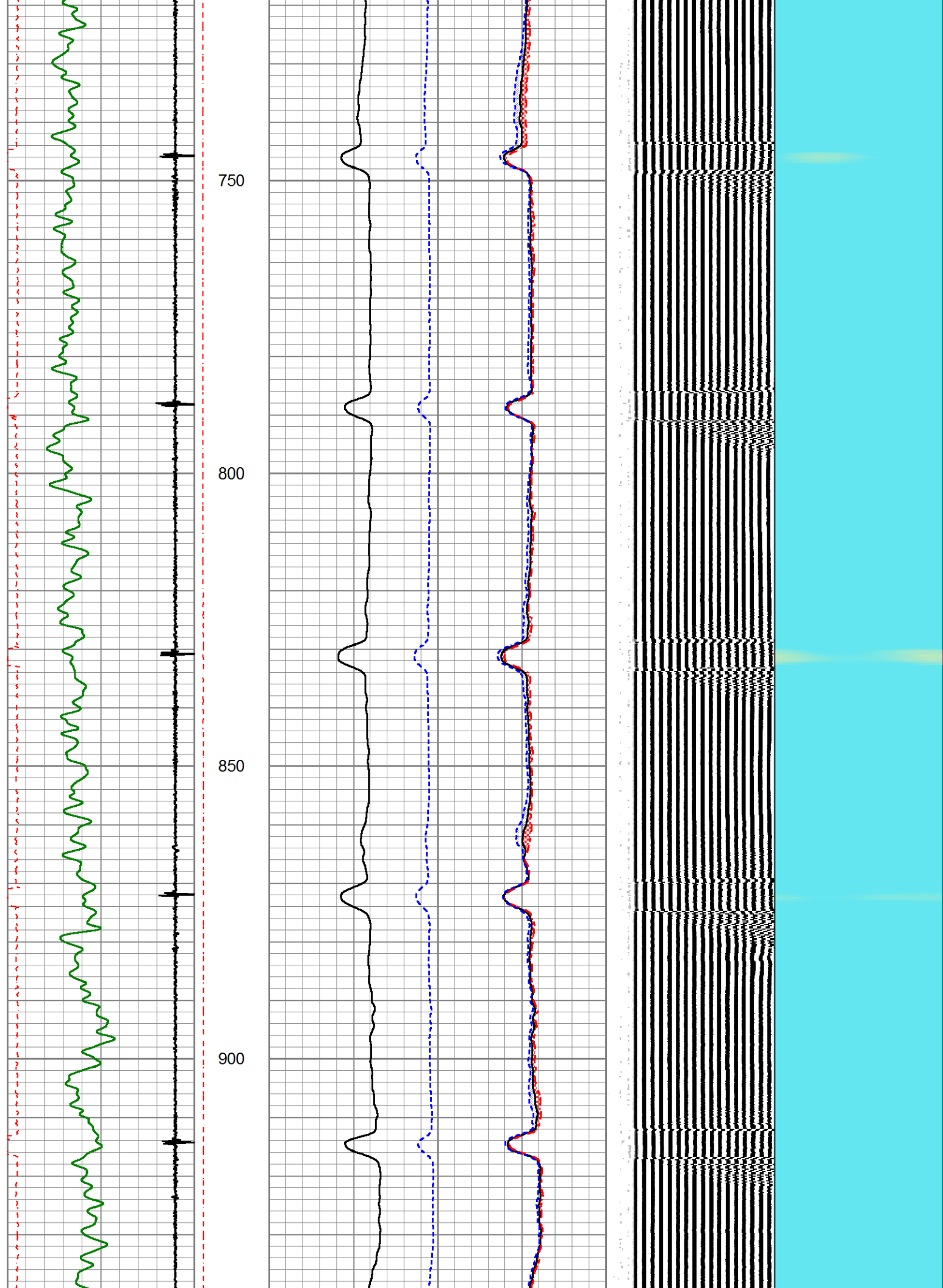




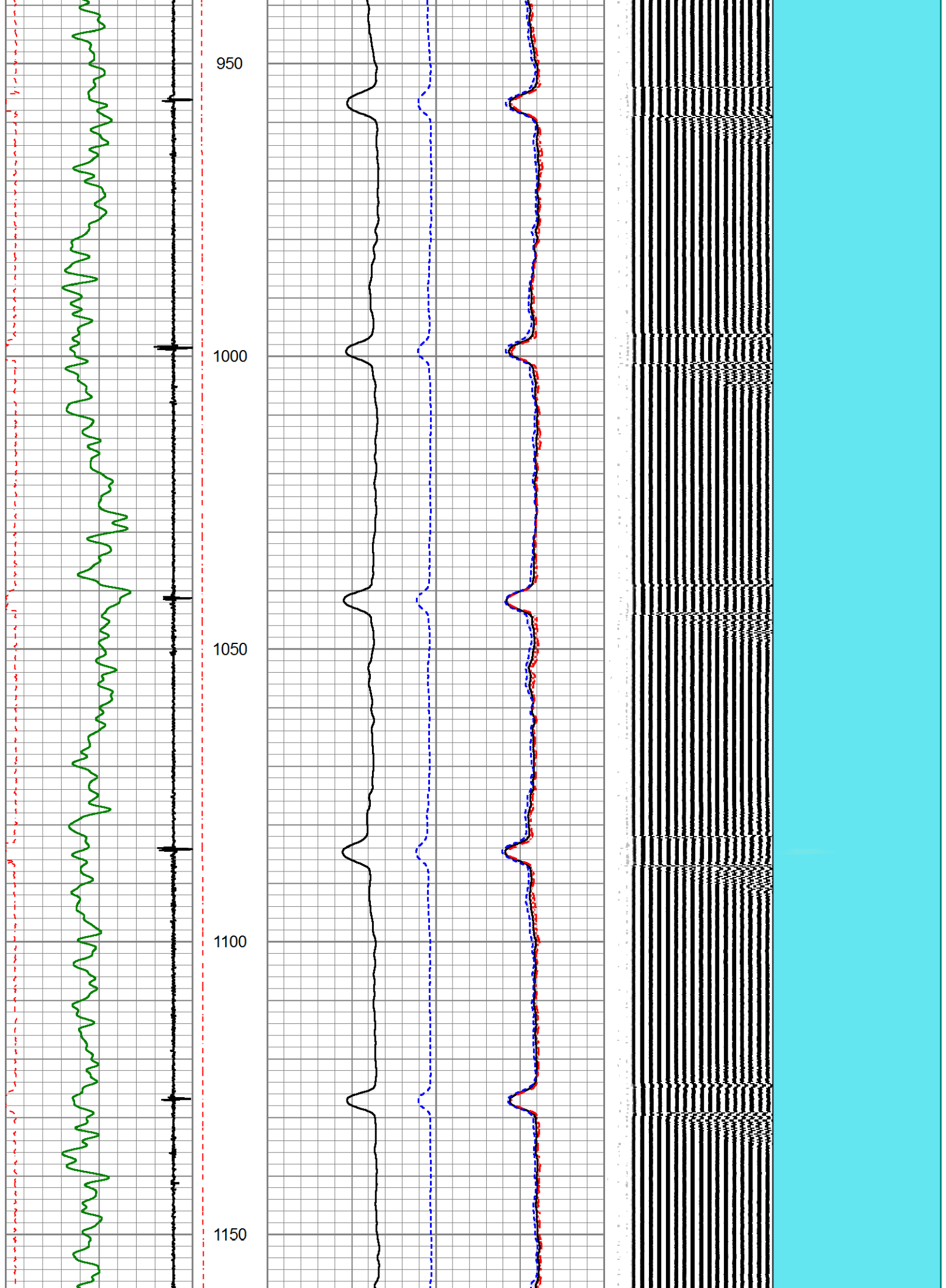


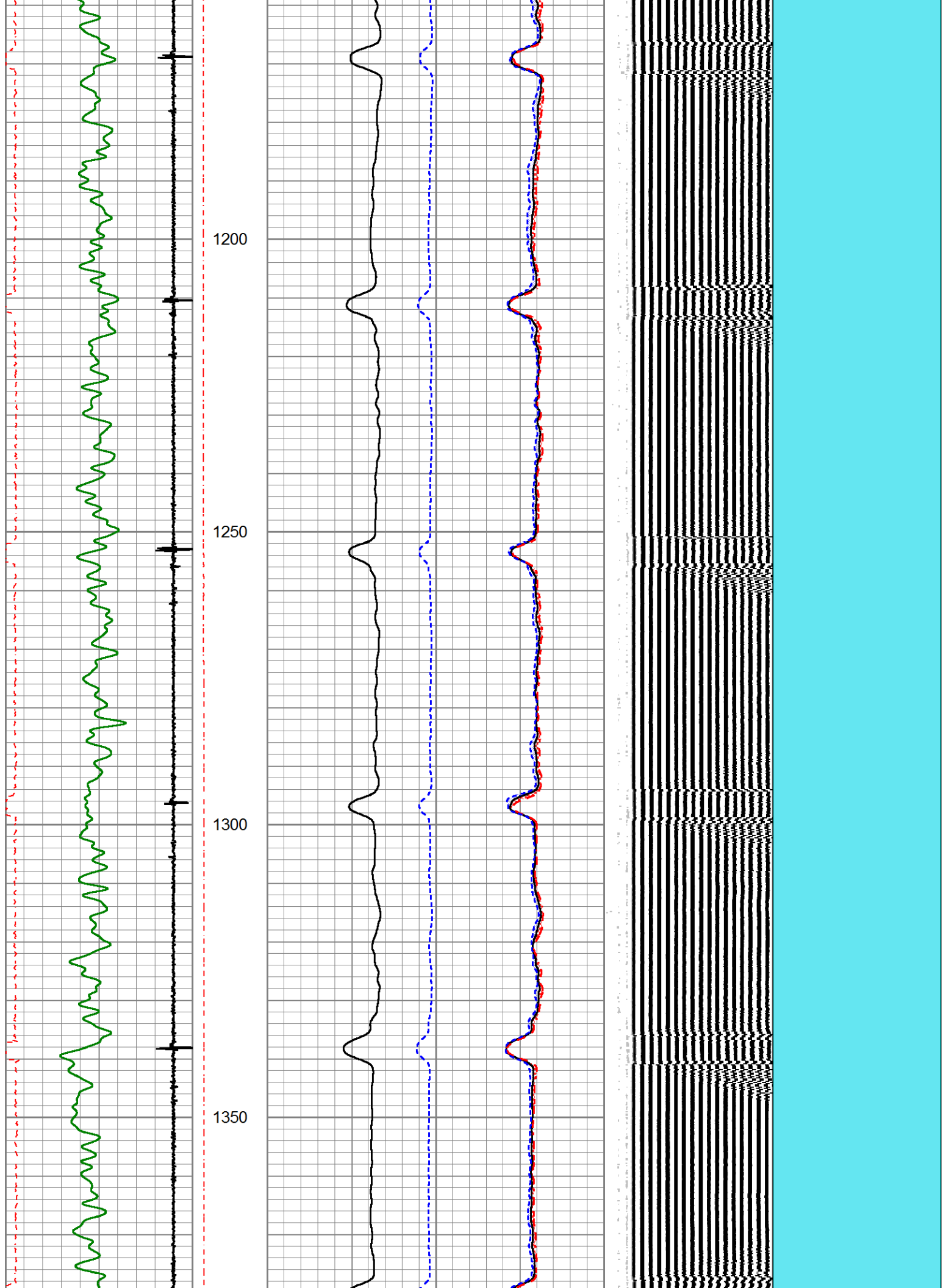


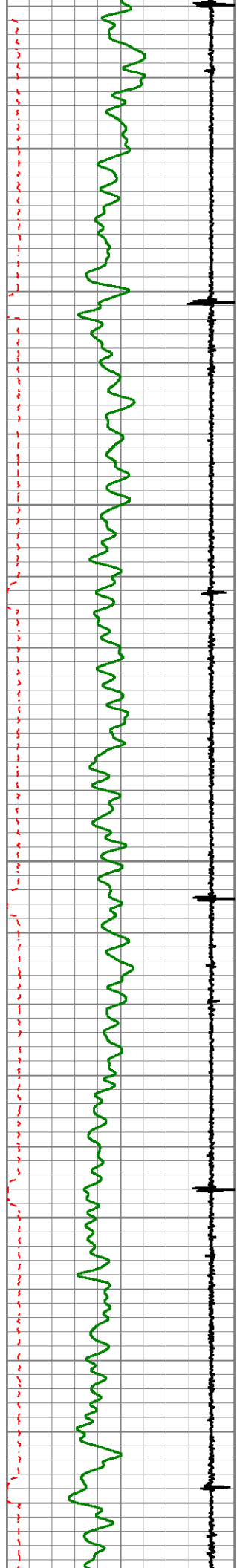












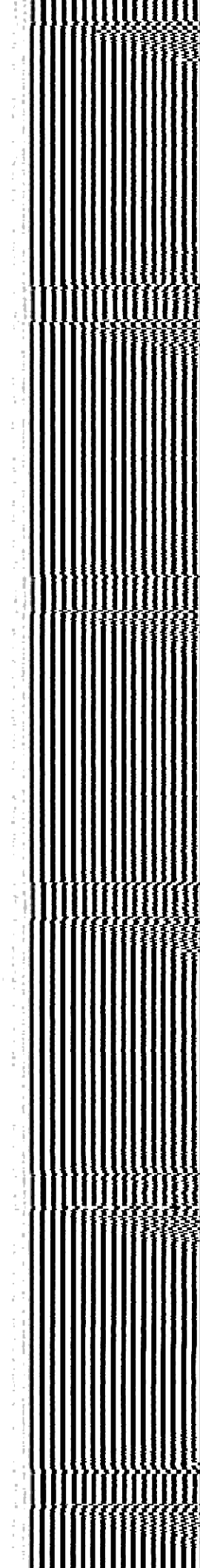
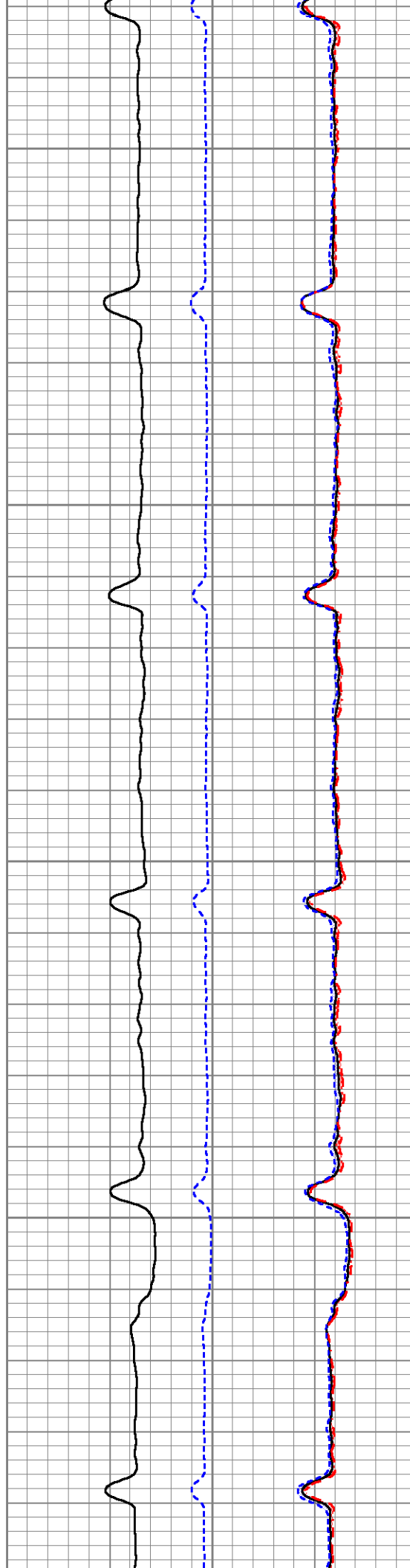
1400

1450

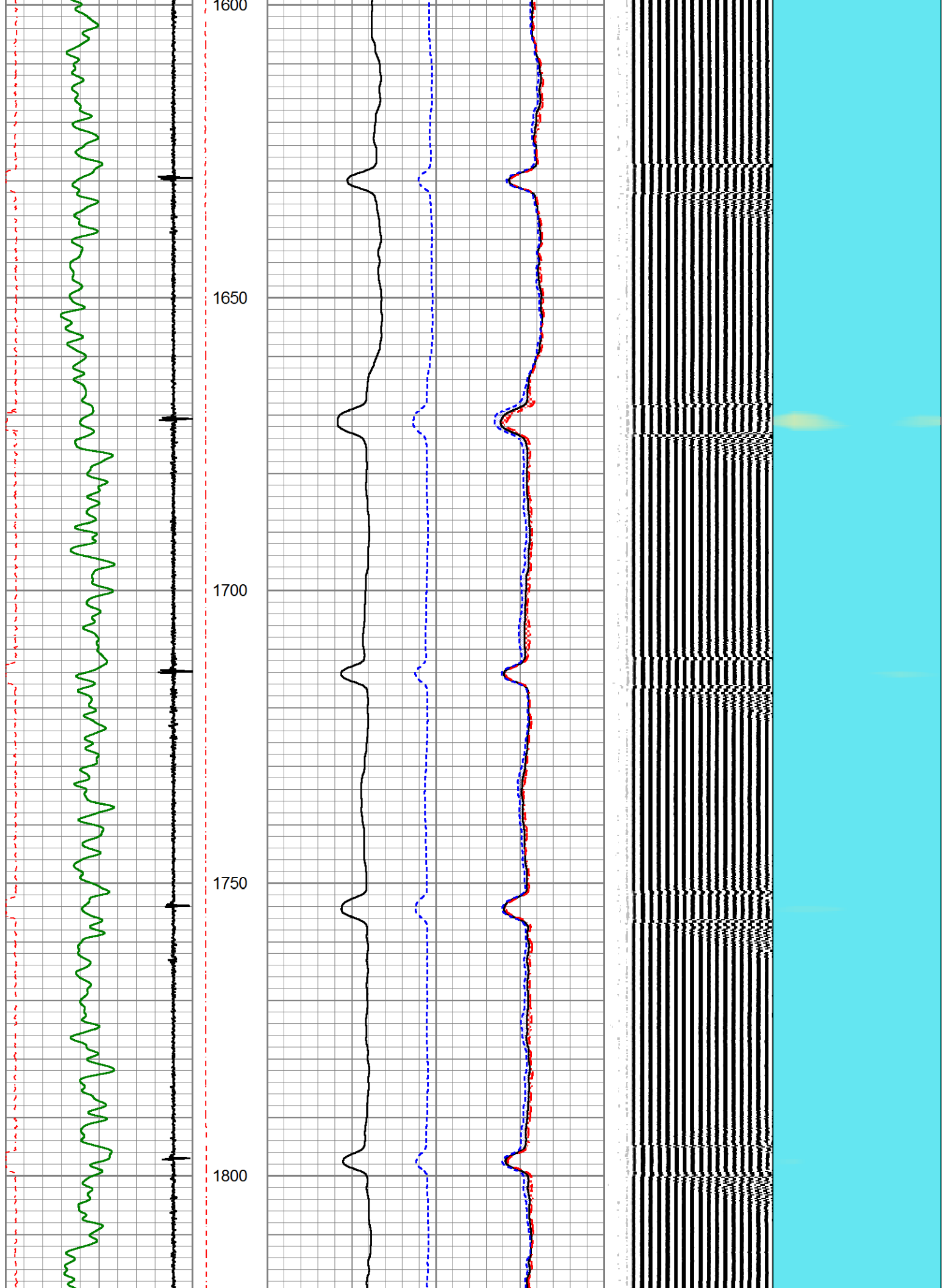
1500

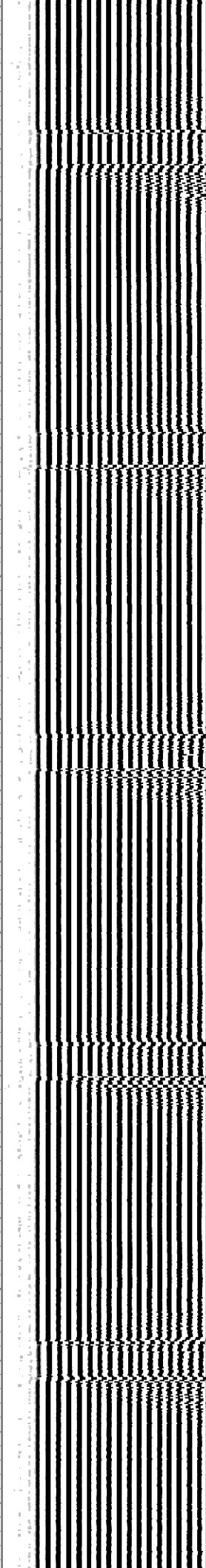
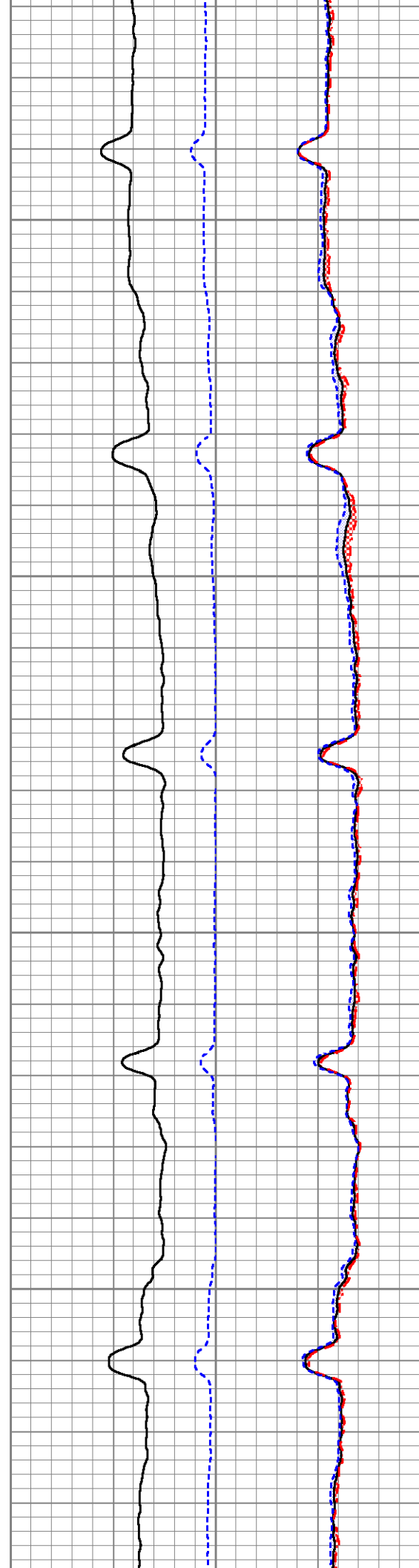
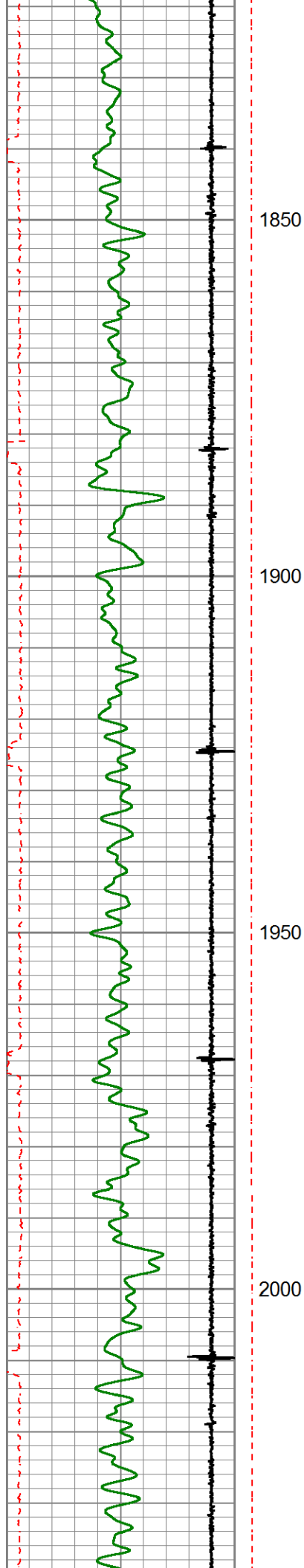
1550

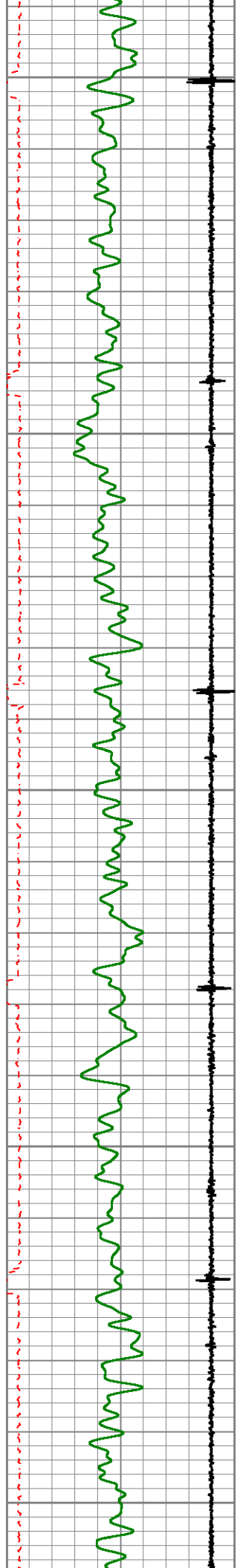
1600











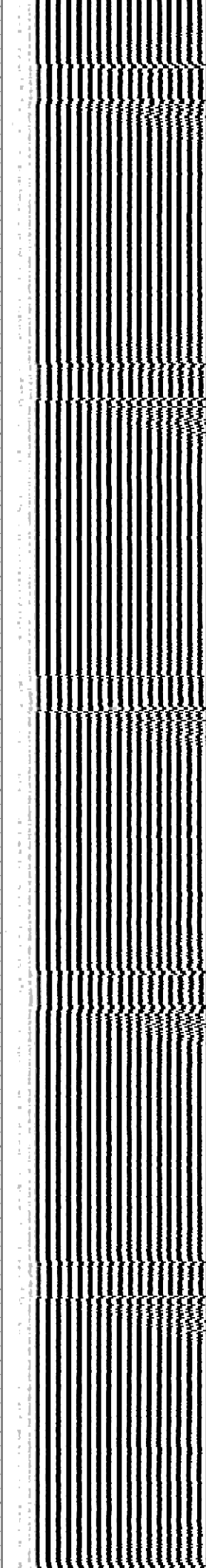
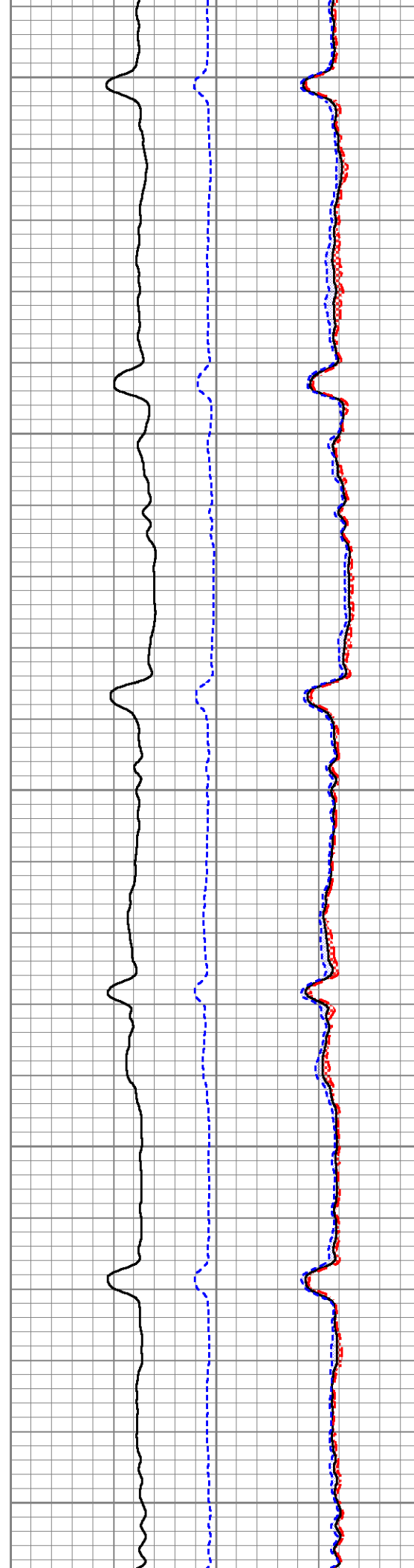
2050

2100

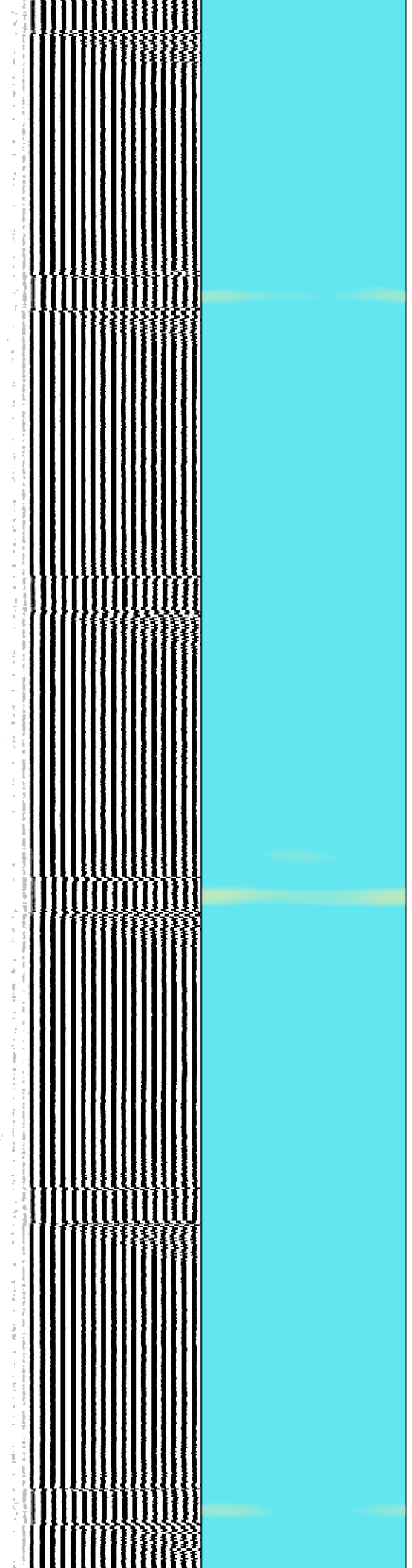
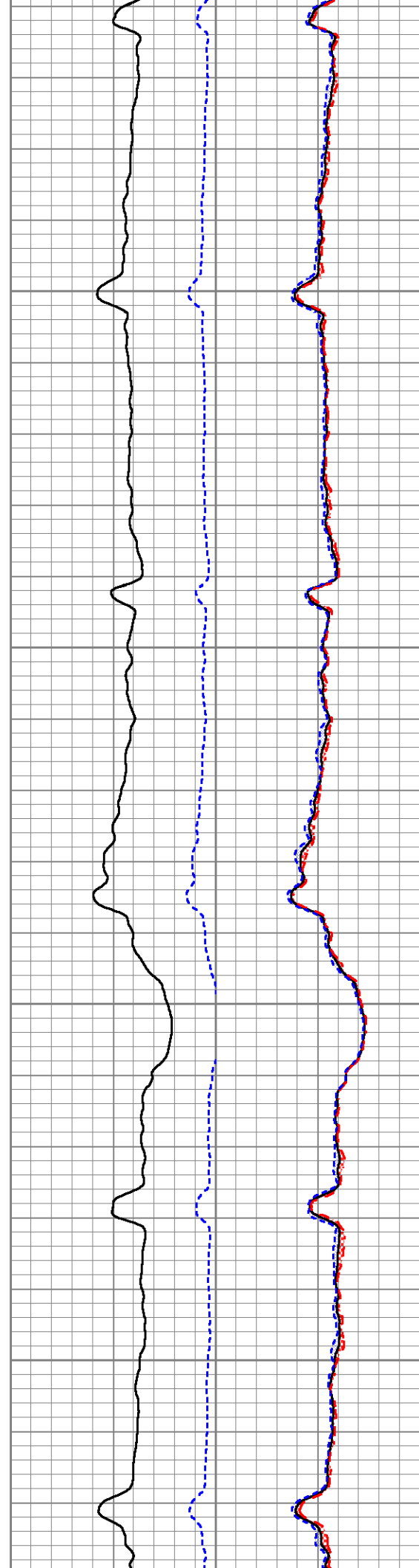
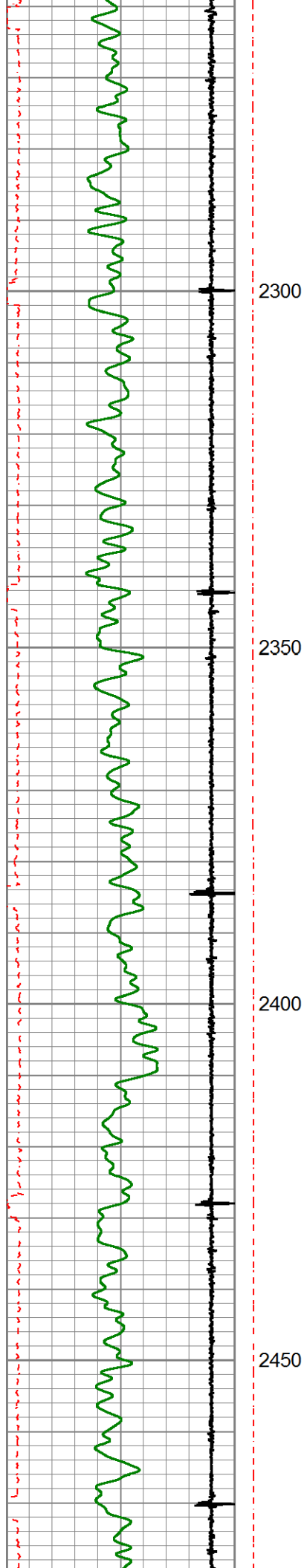
2150

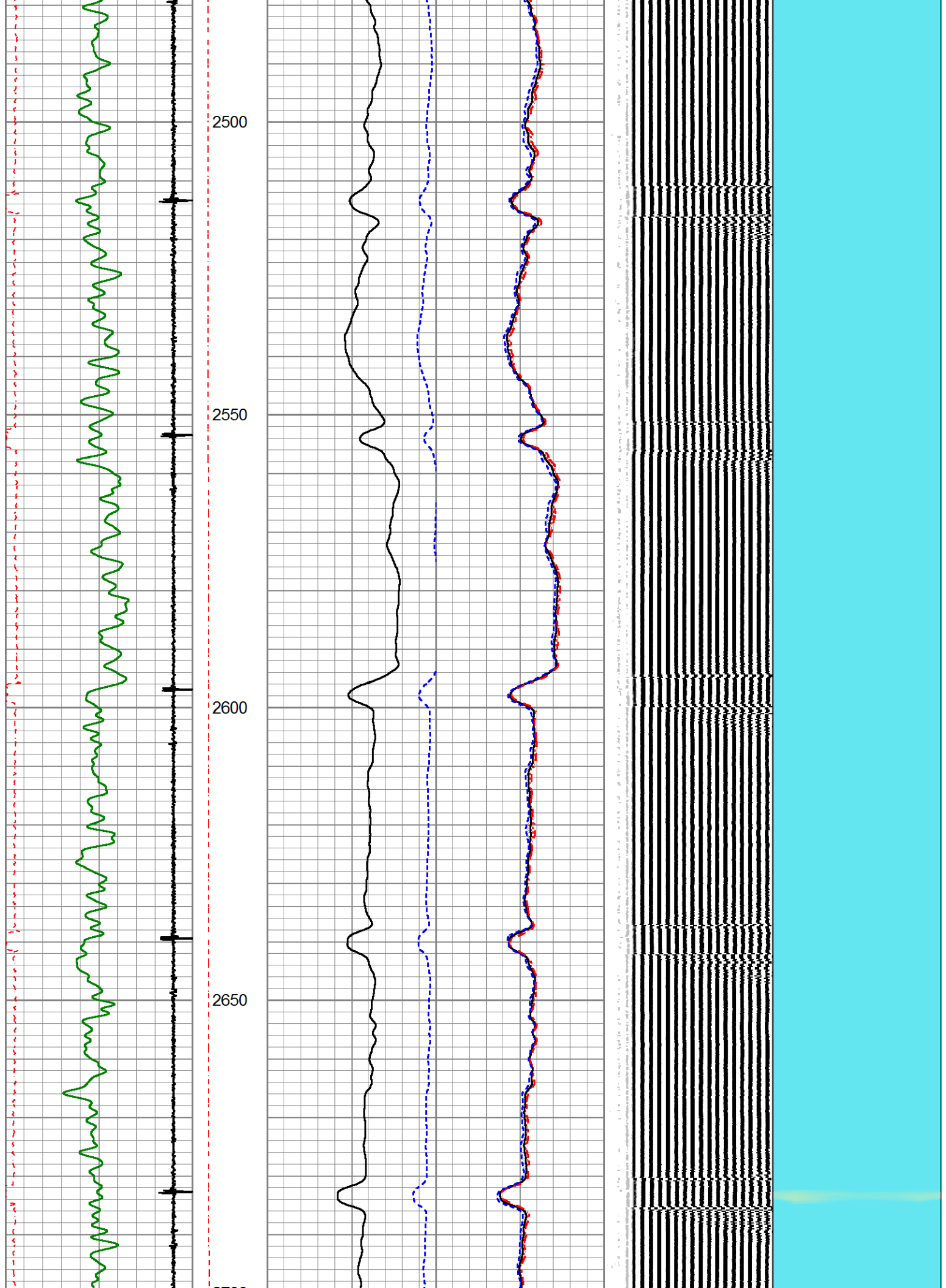
2200

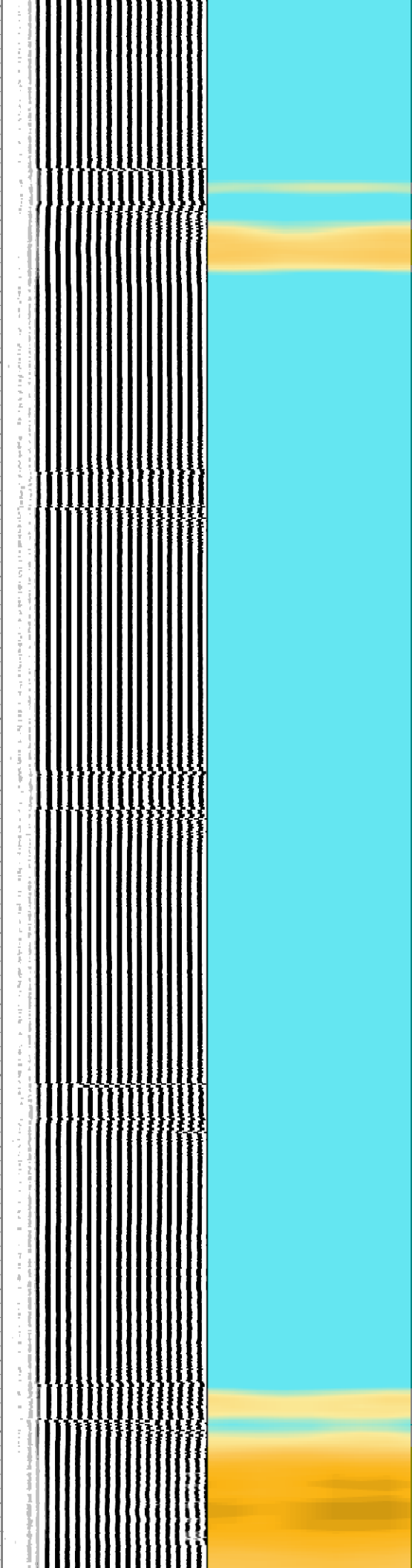
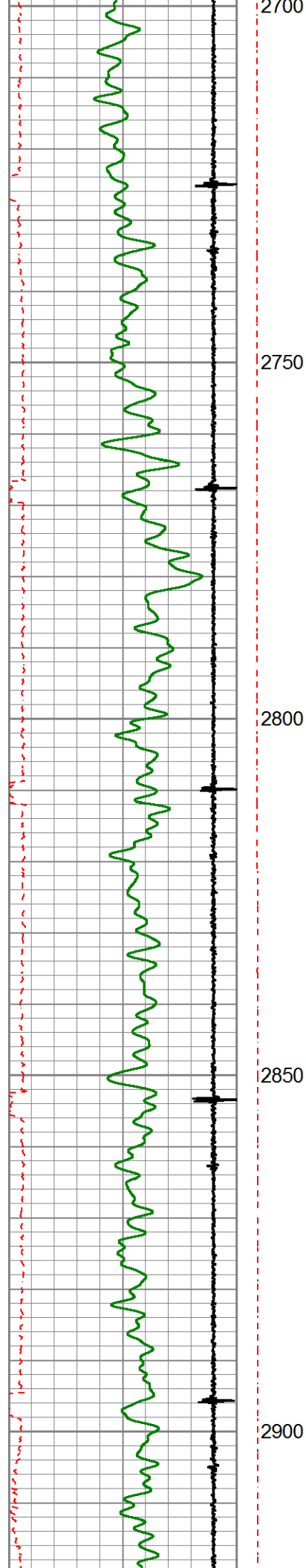
2250



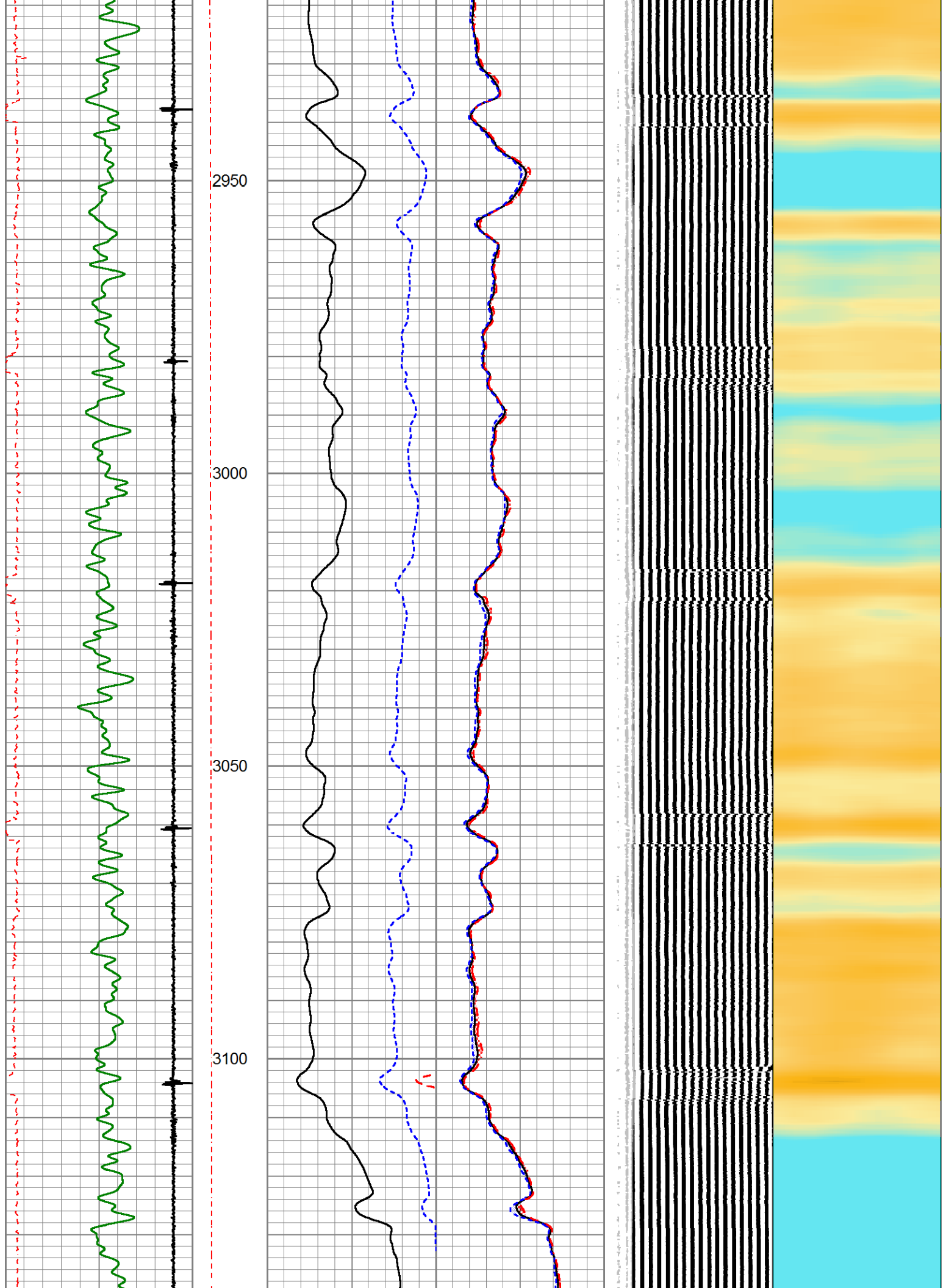


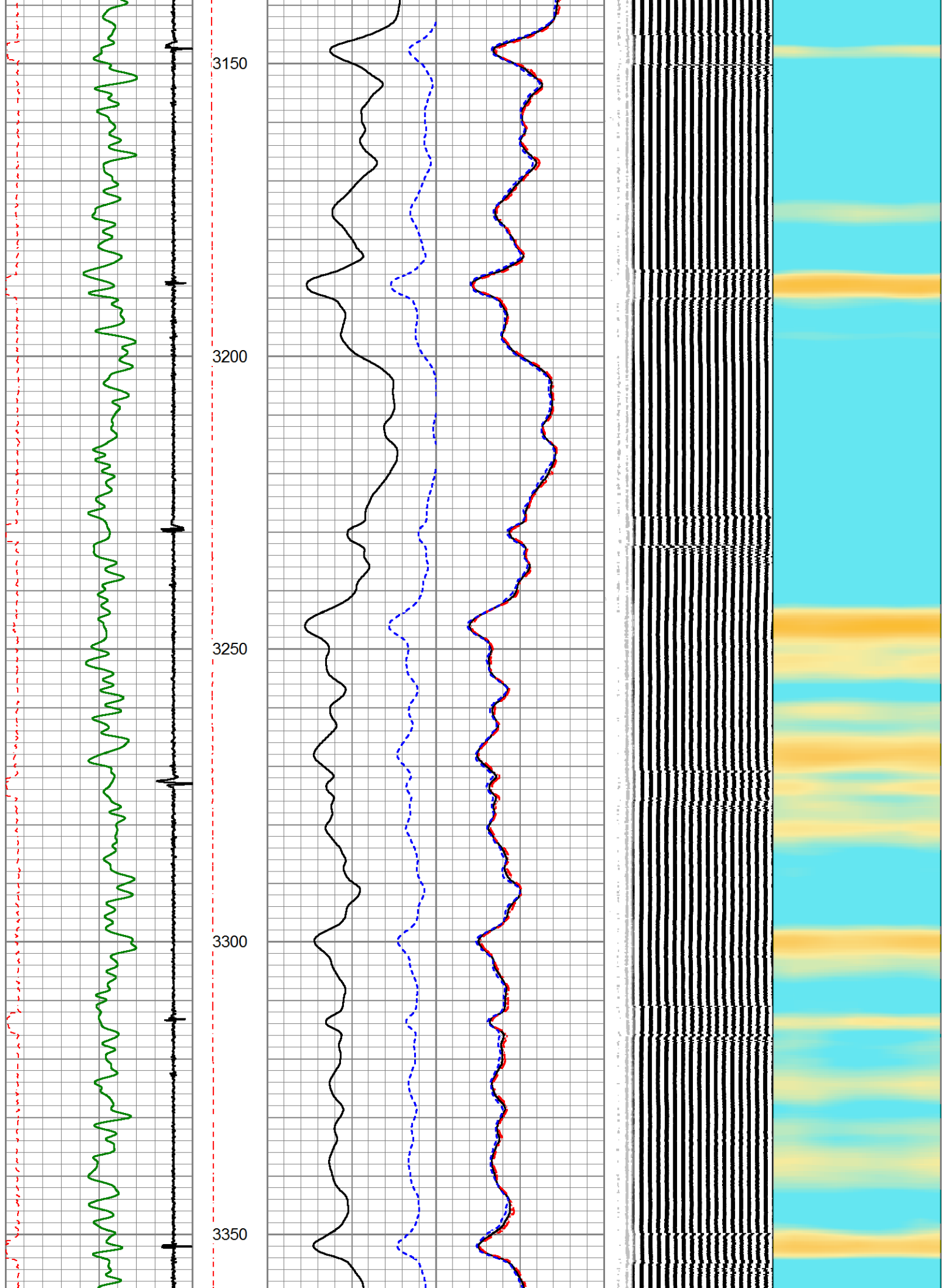


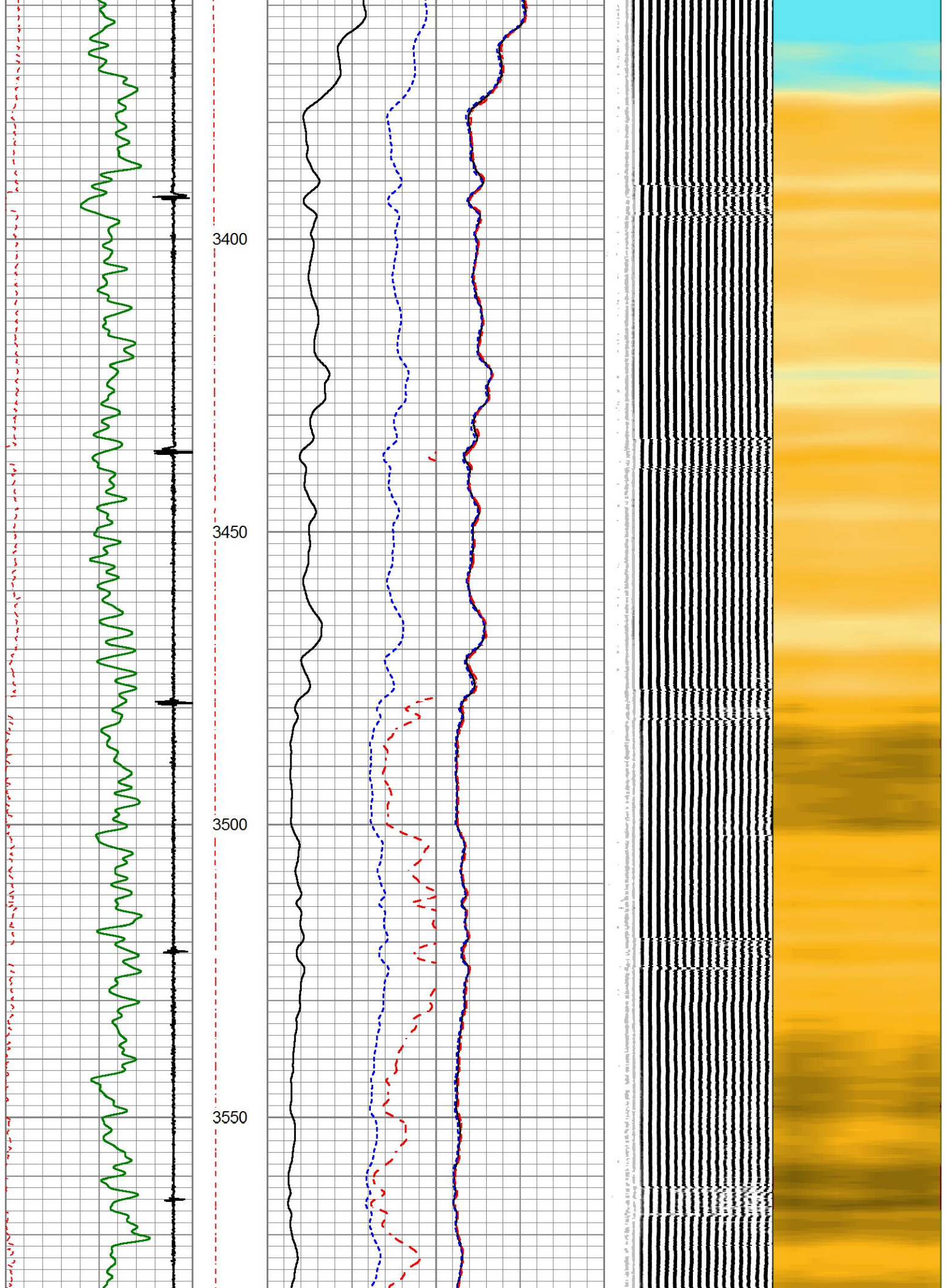






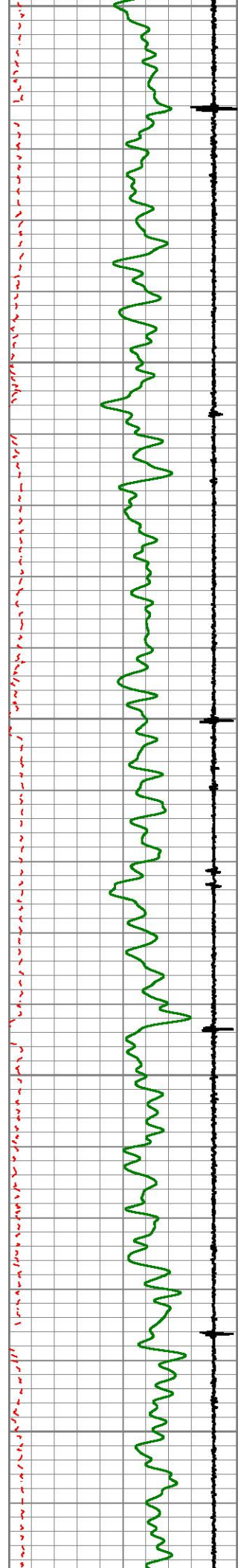




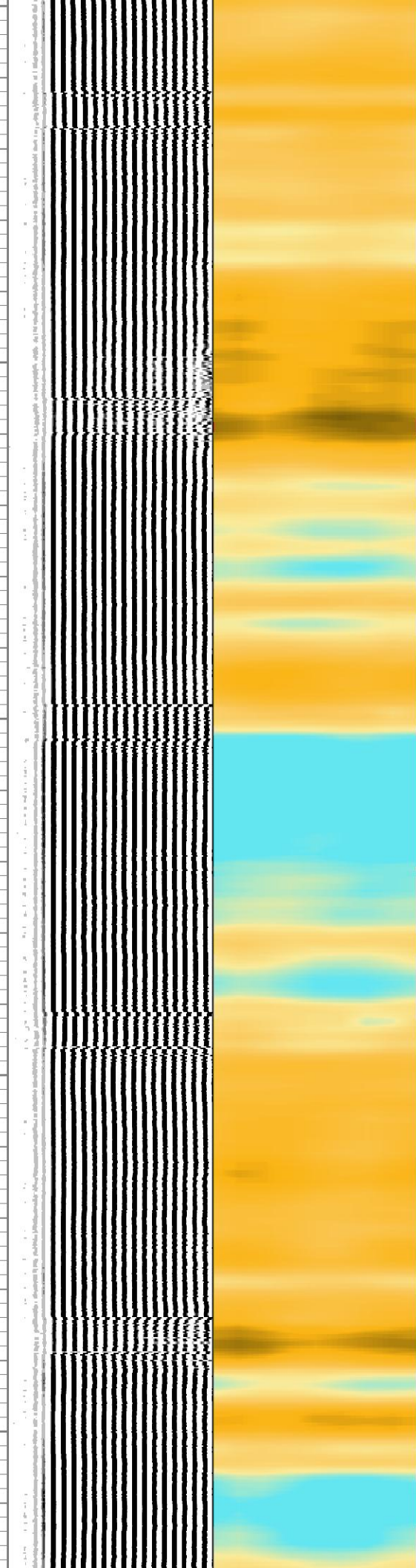
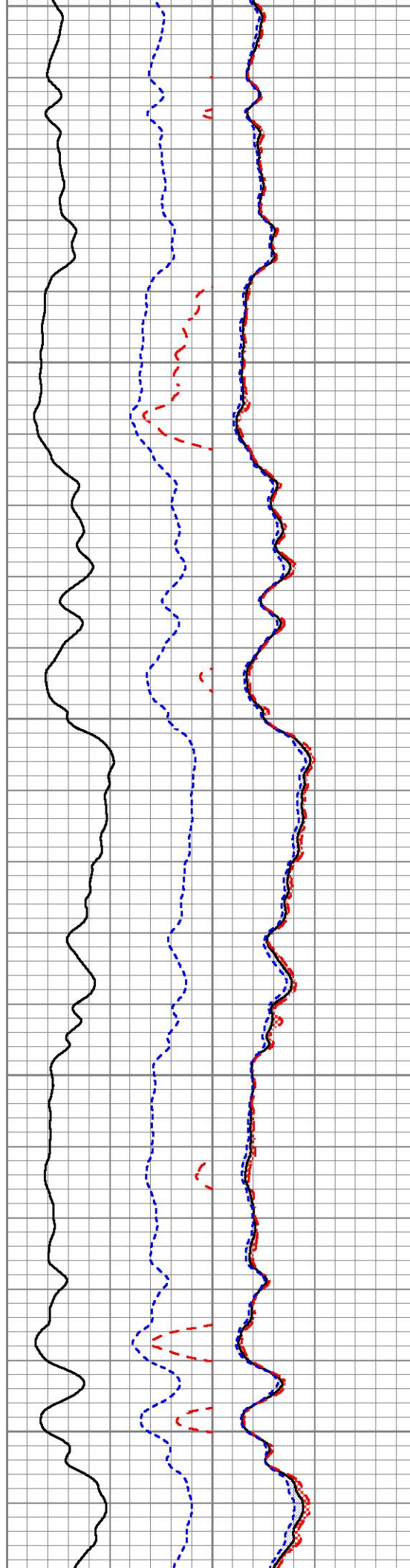


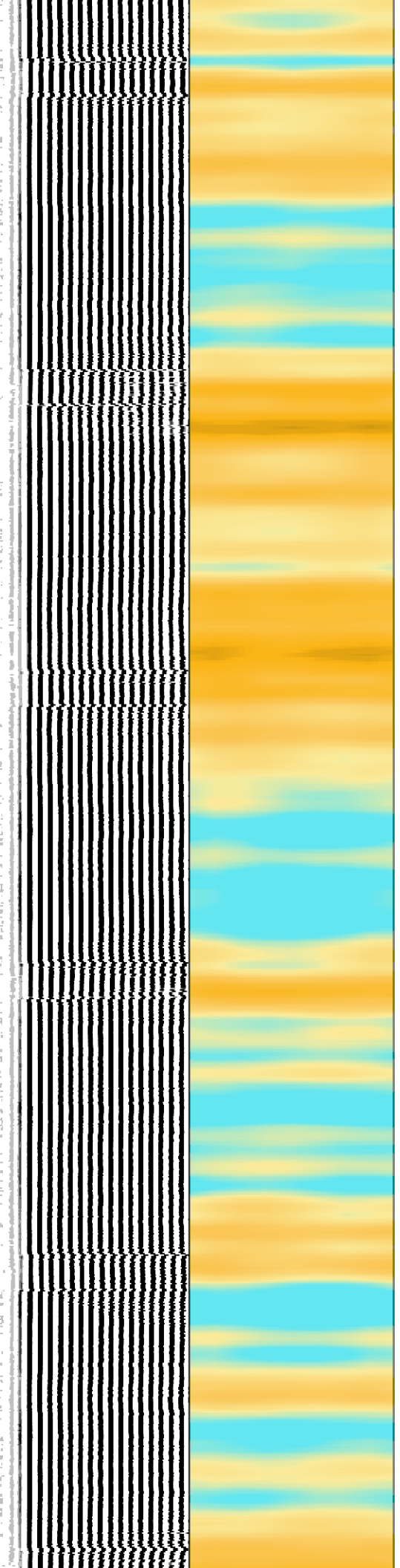
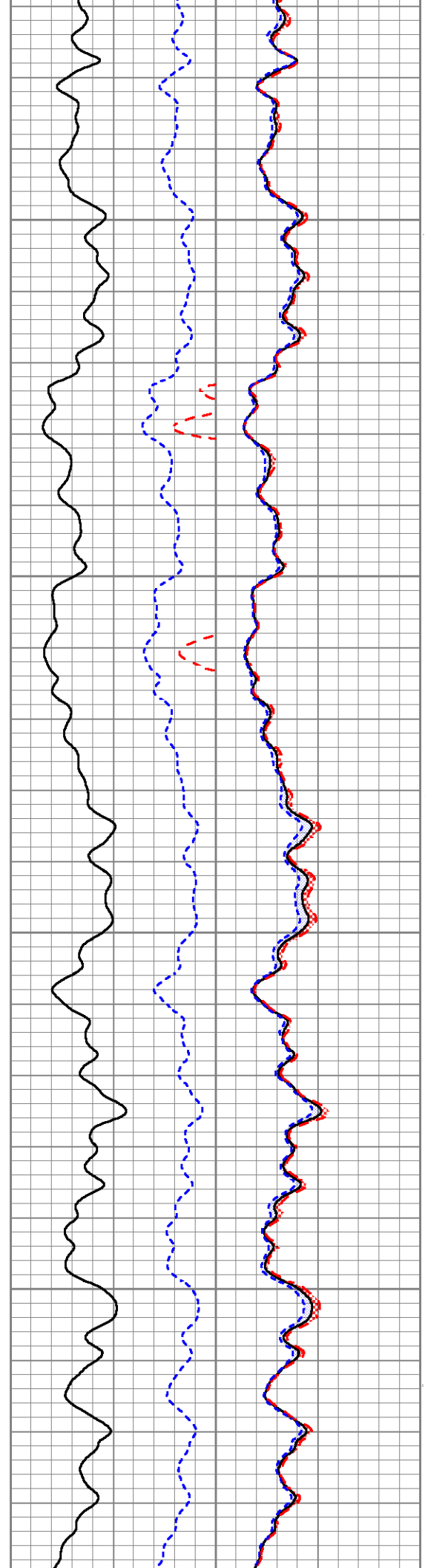
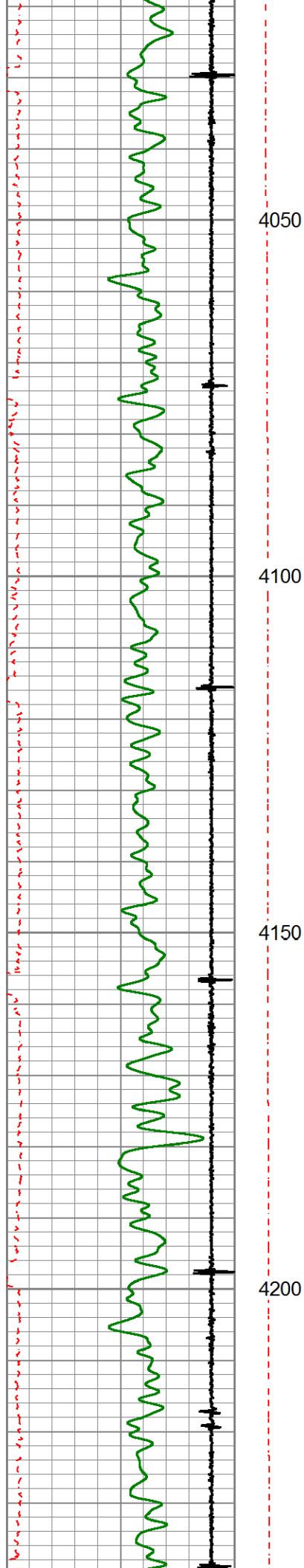


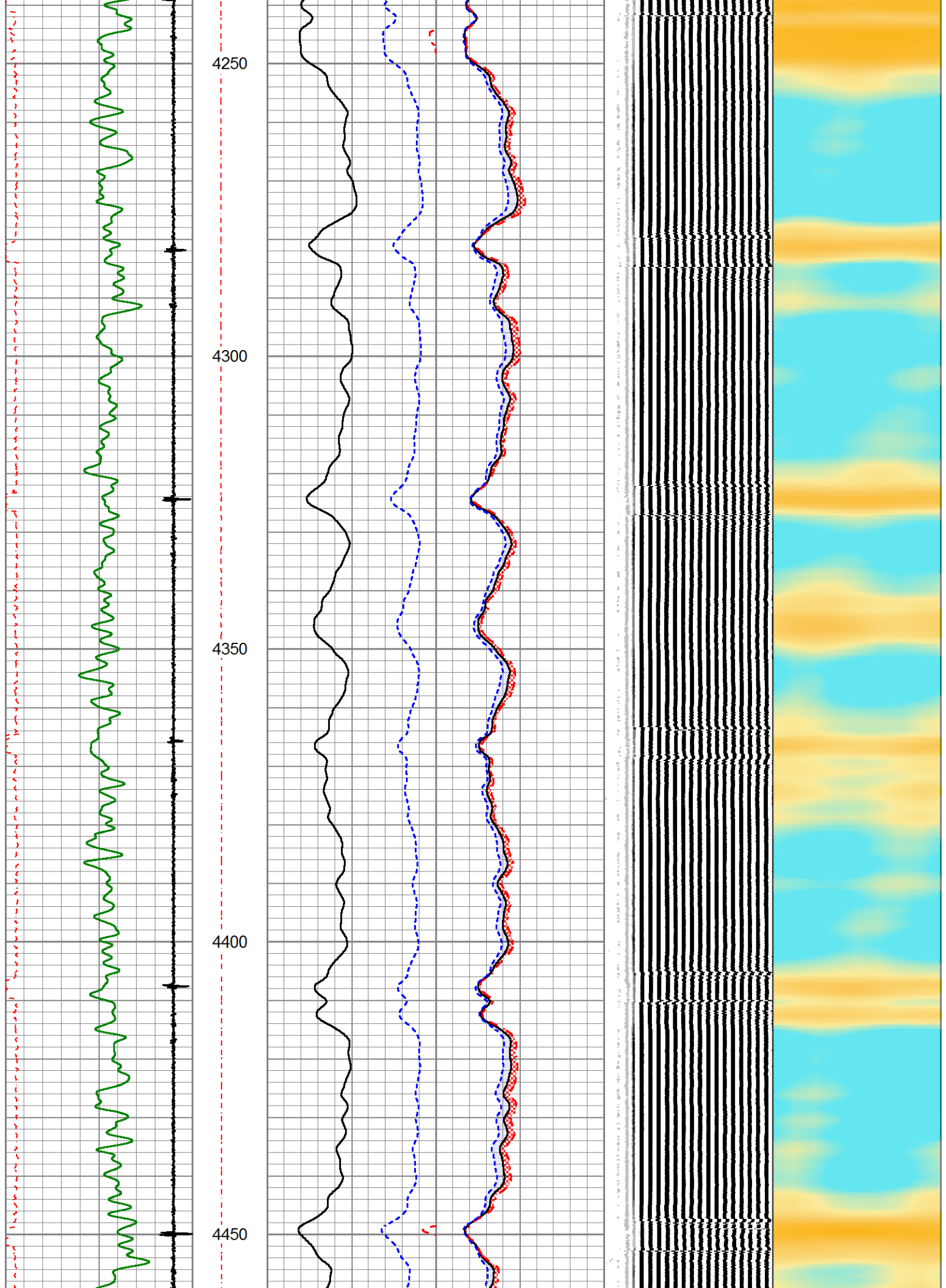




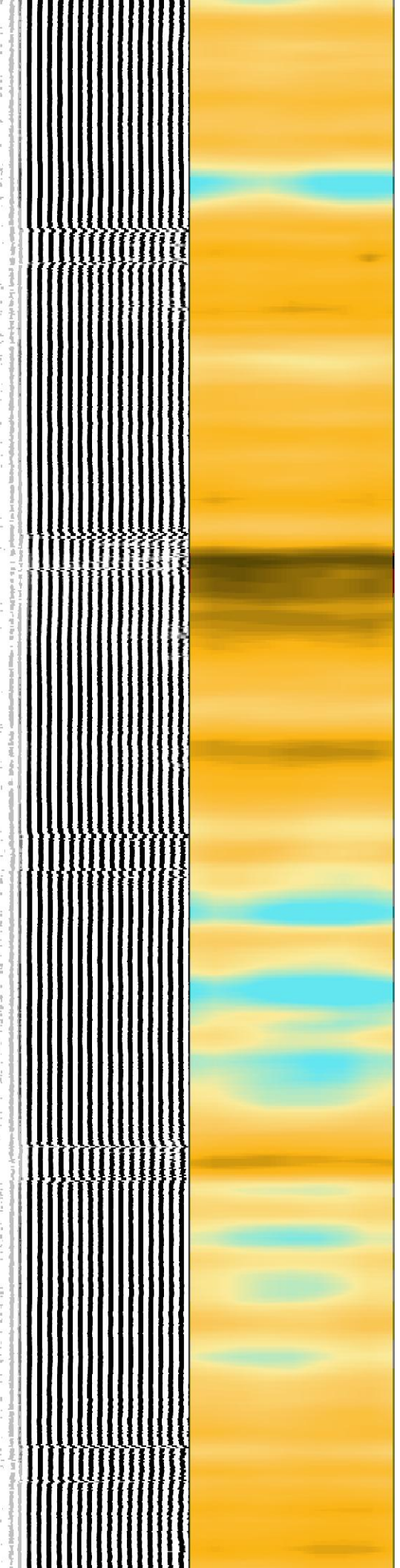
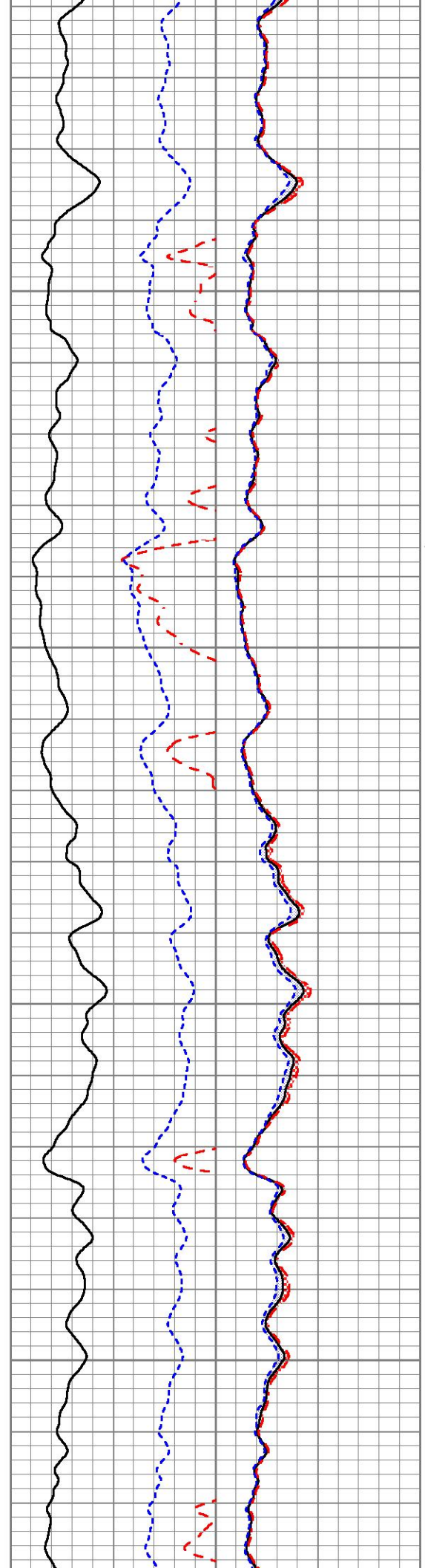
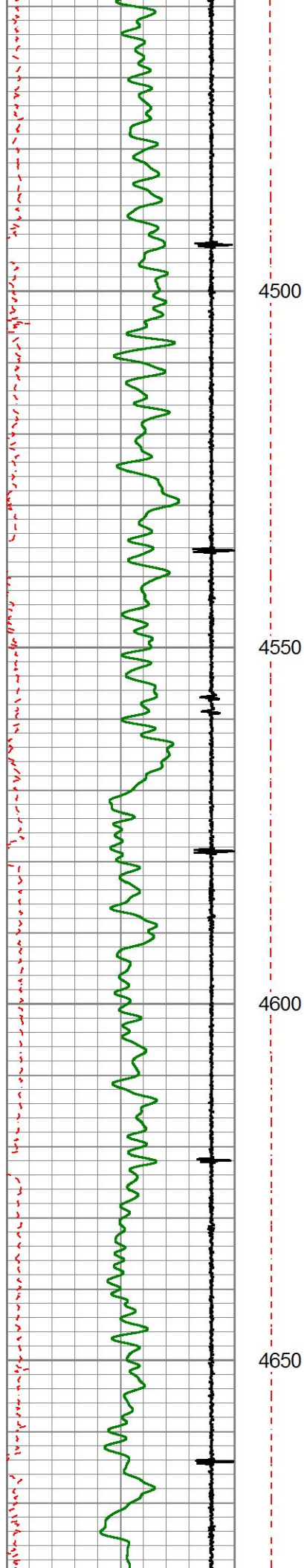
3800  
3850  
3900  
3950  
4000



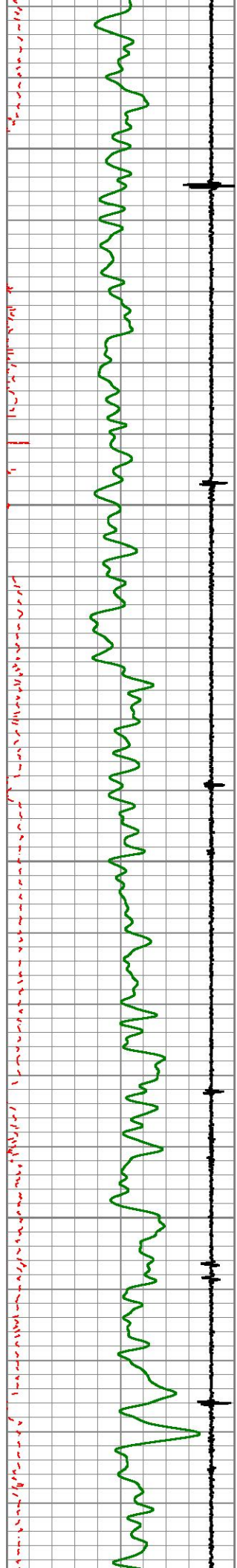










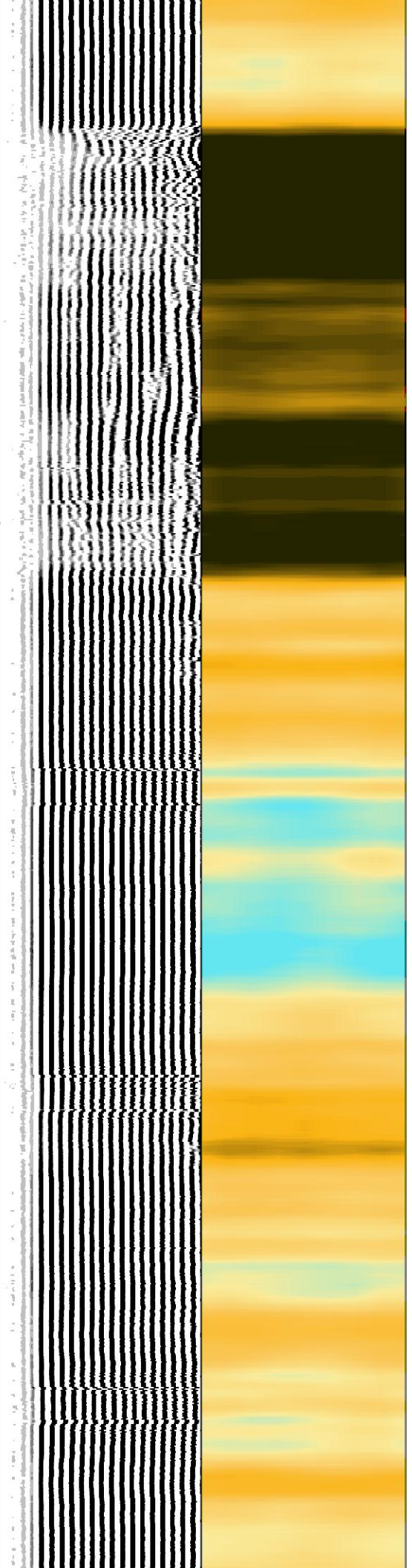
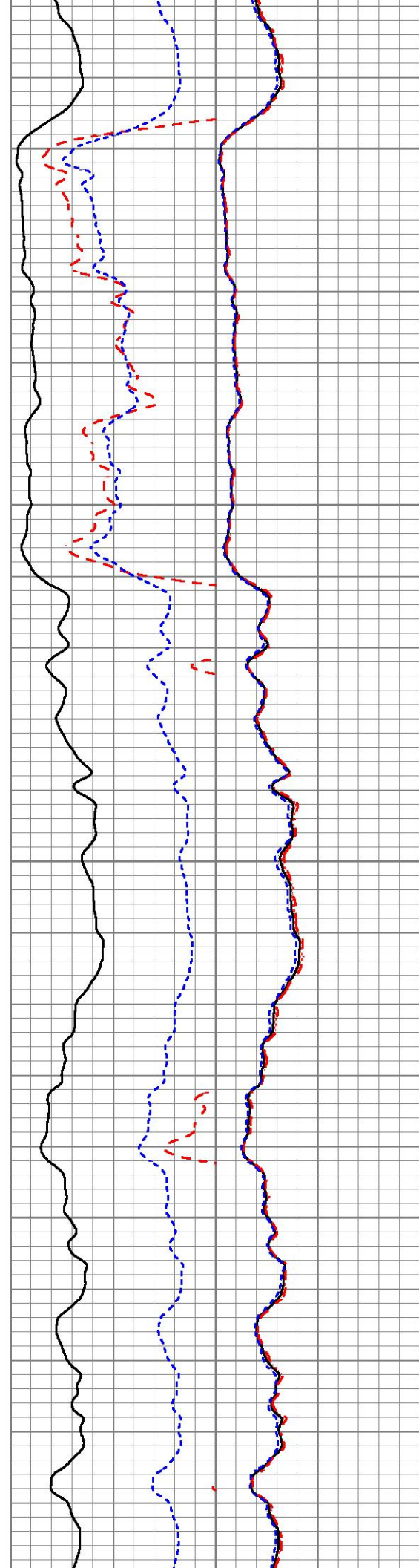


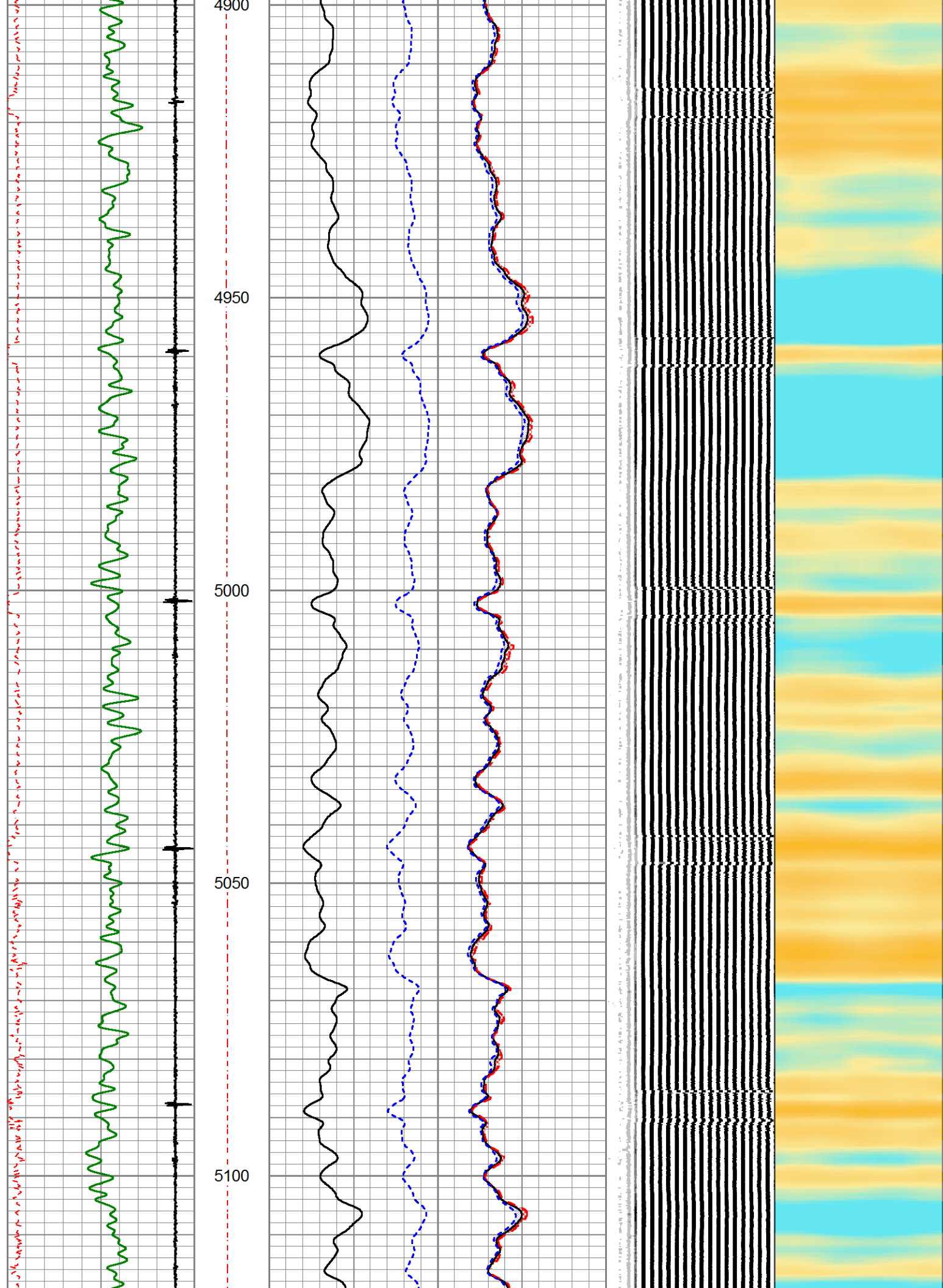
4700

4750

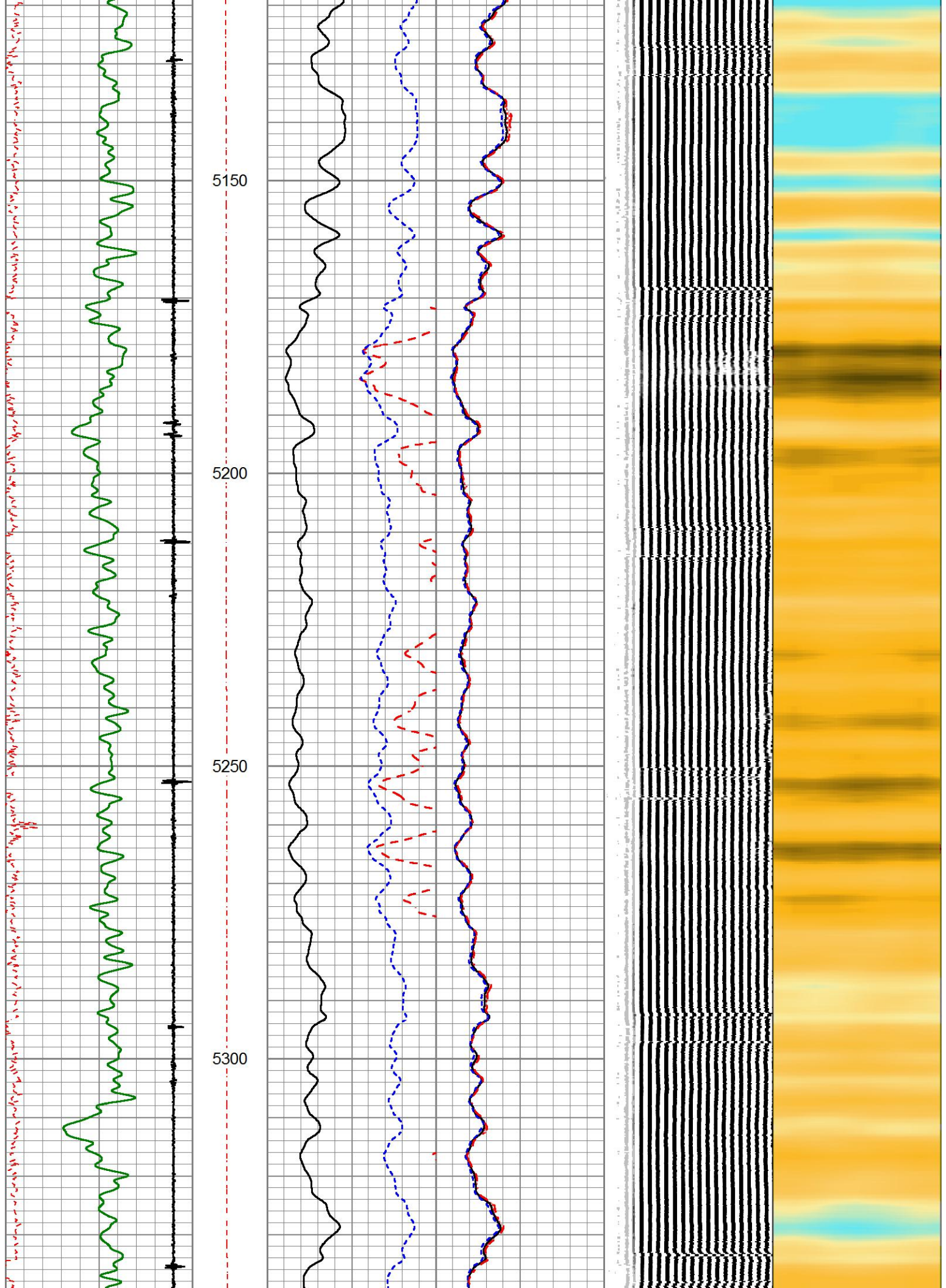
4800

4850

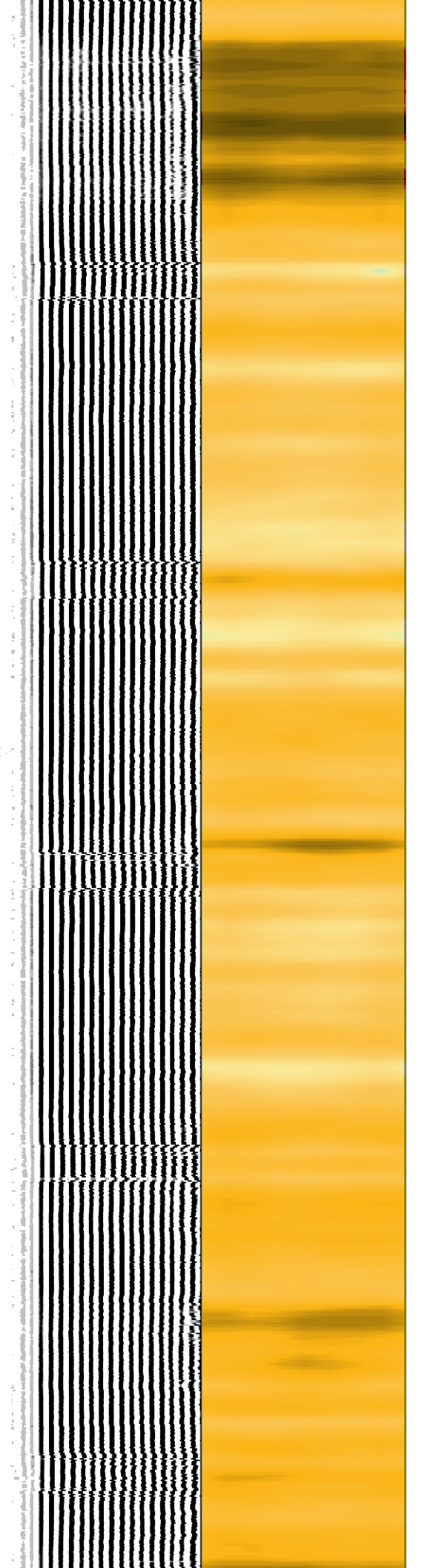
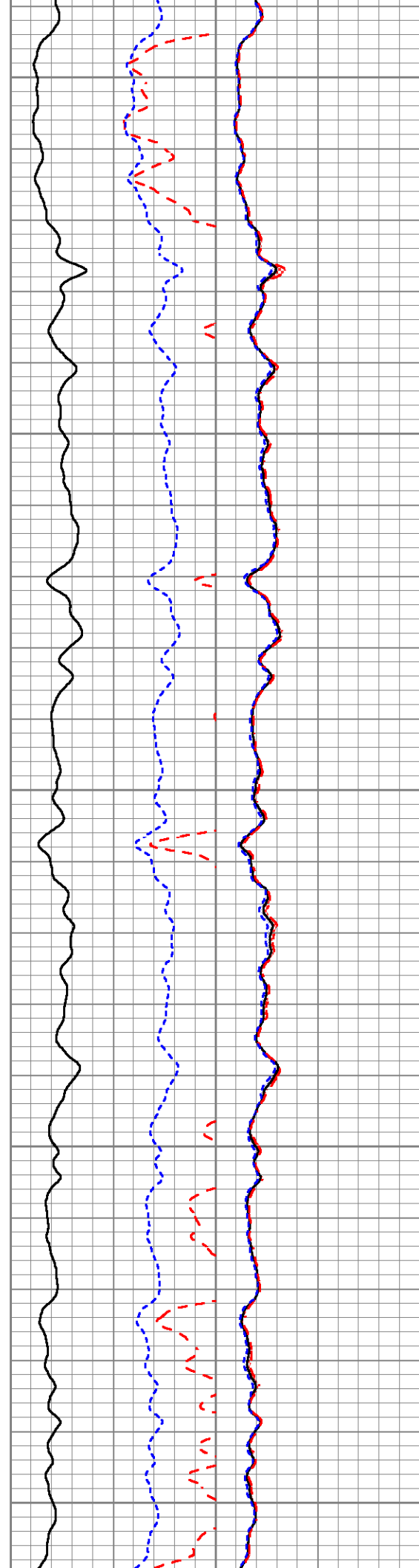
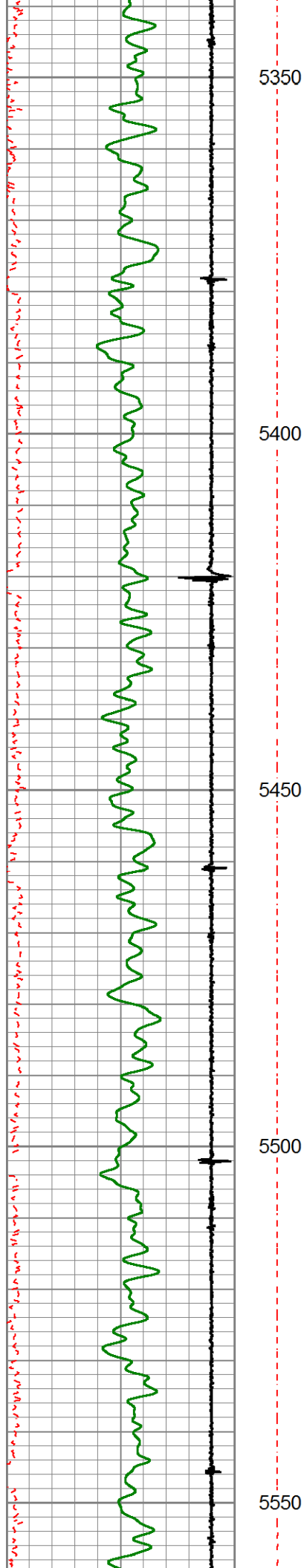


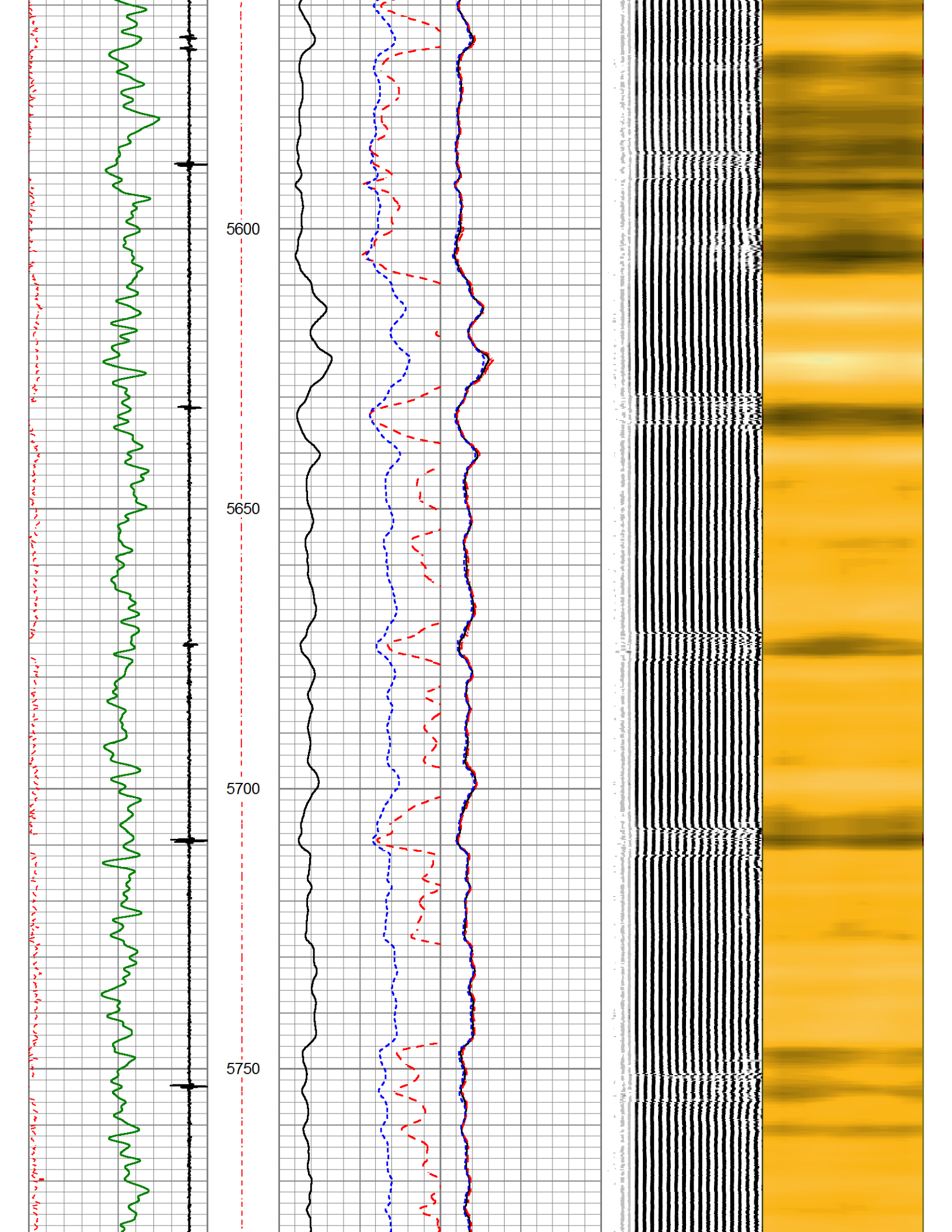


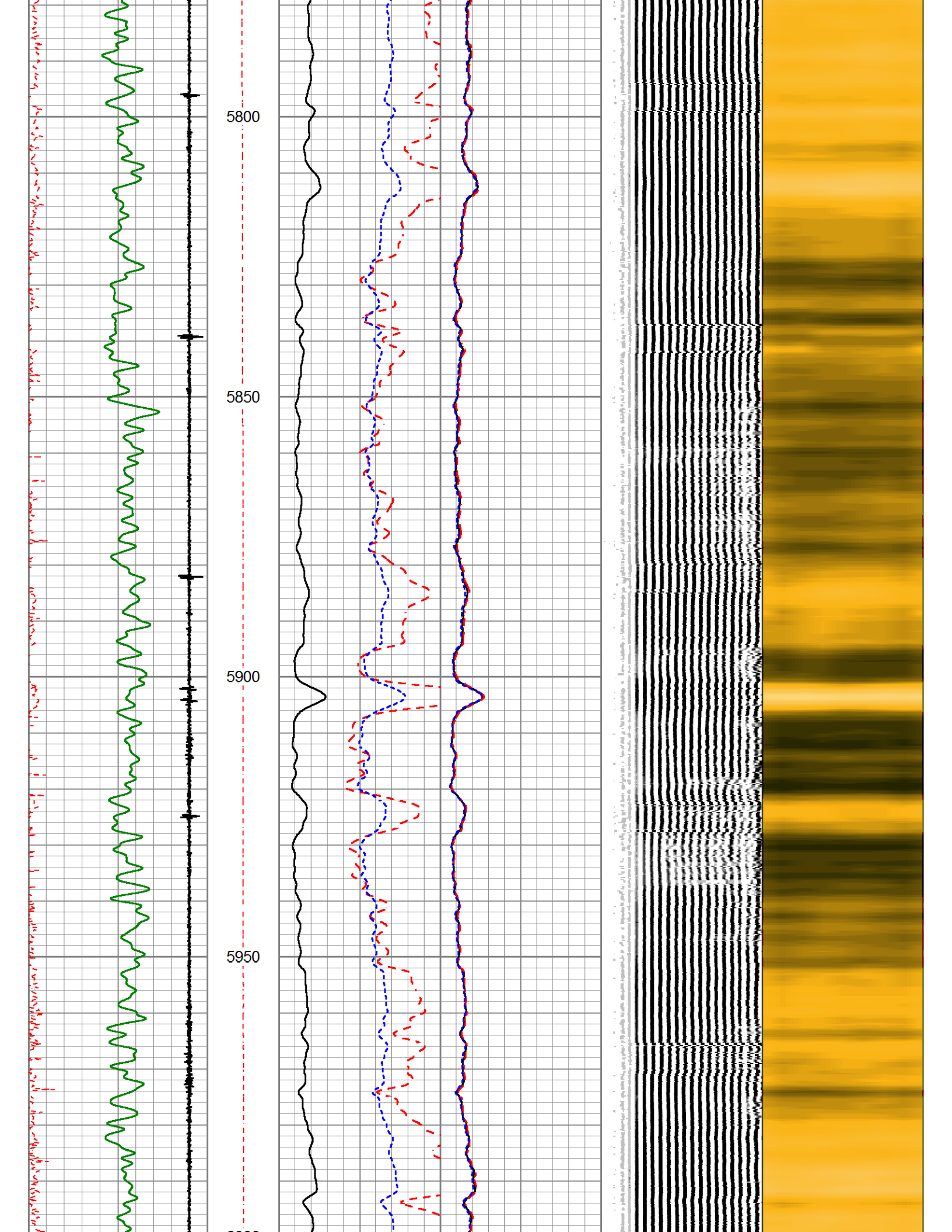




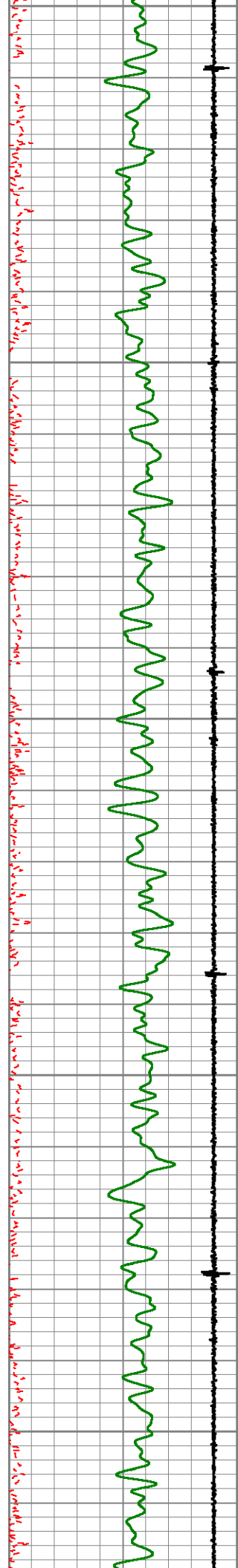




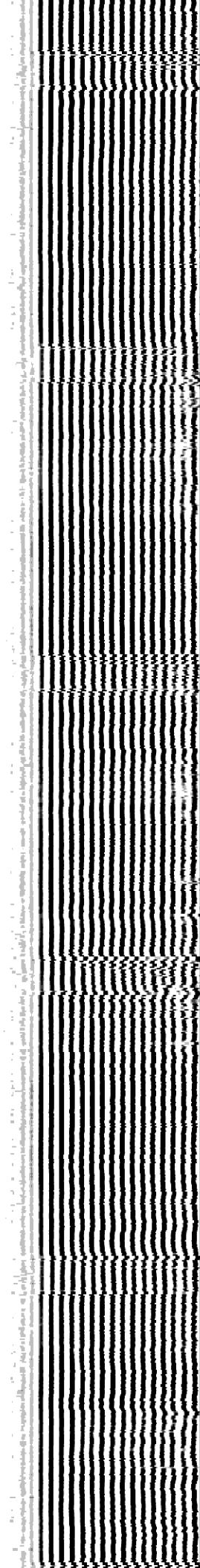
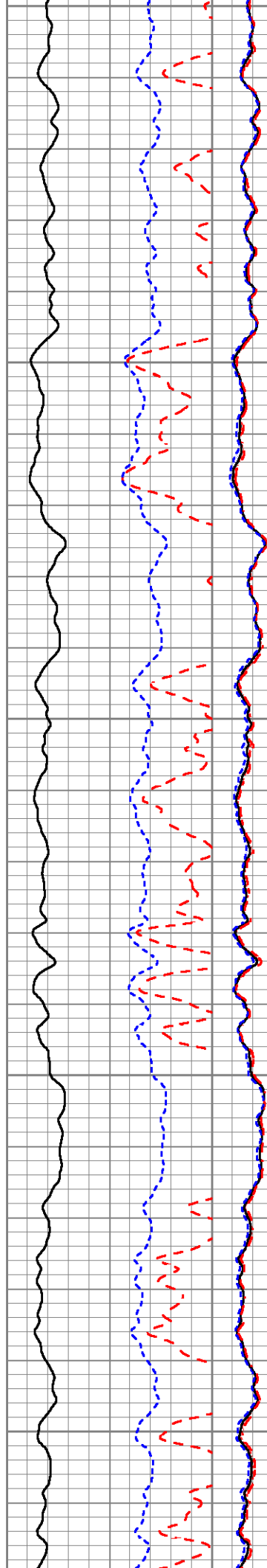


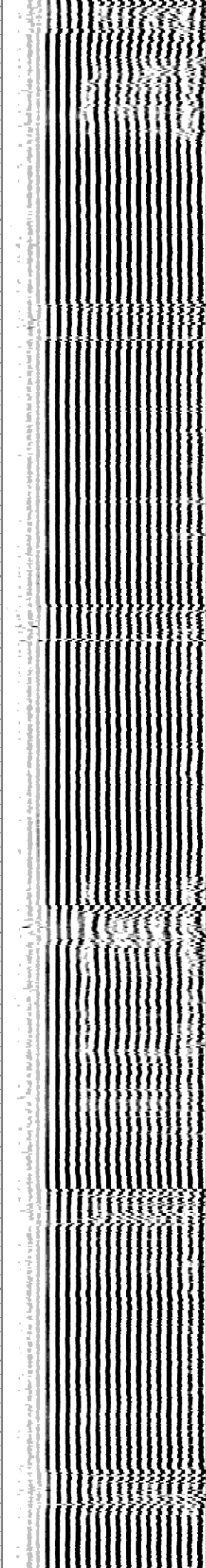
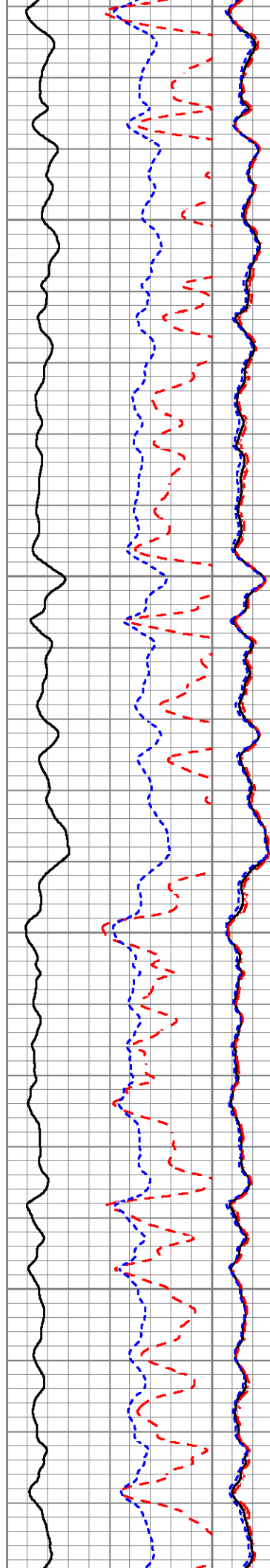
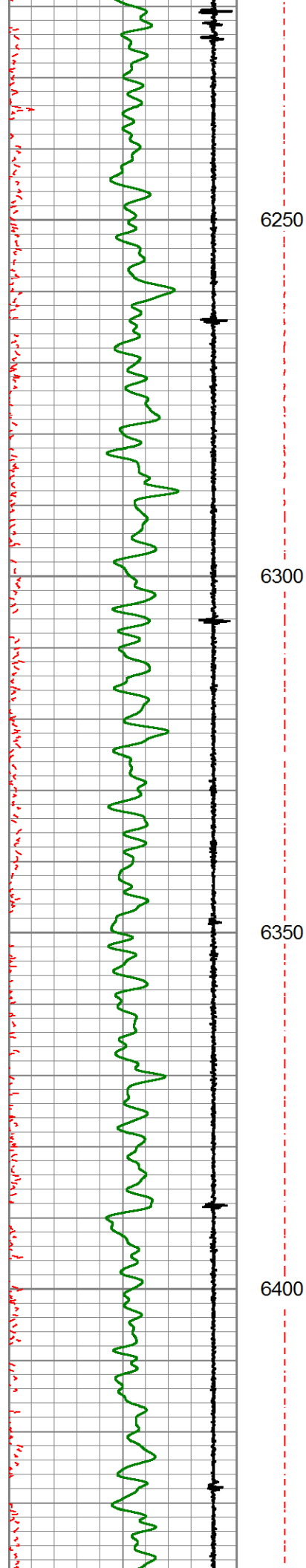


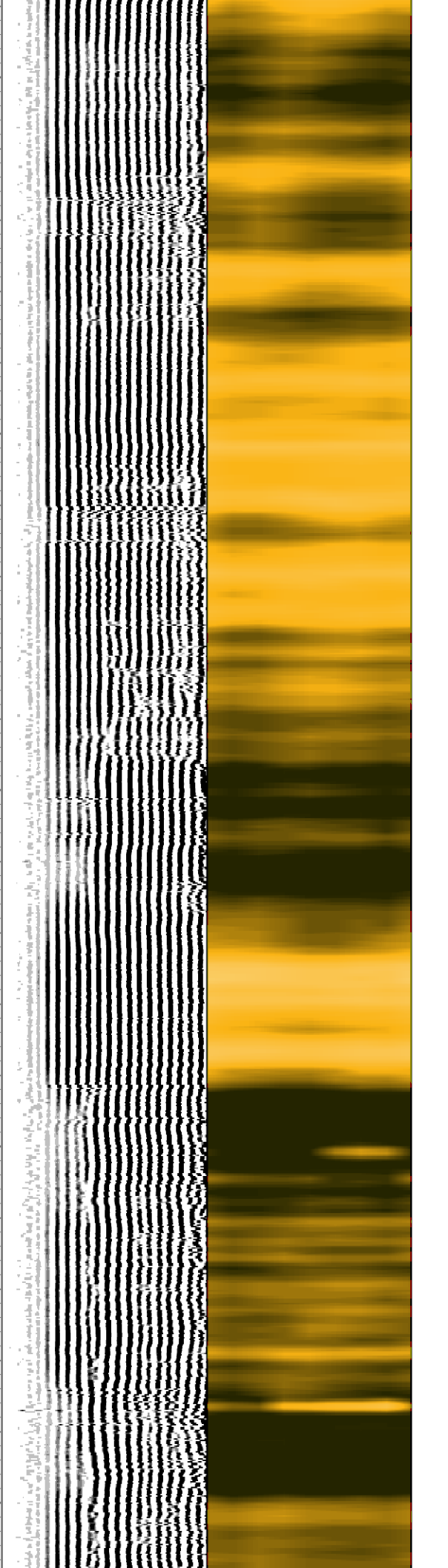
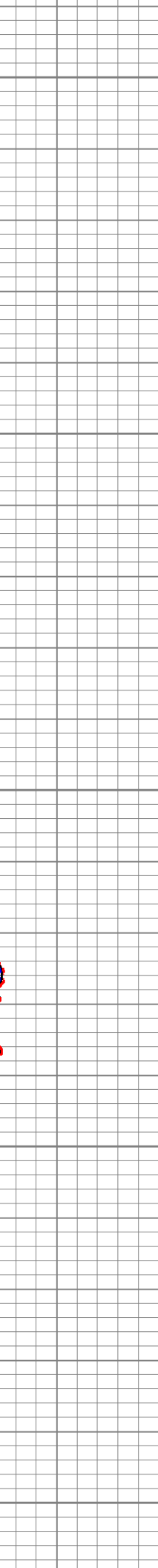
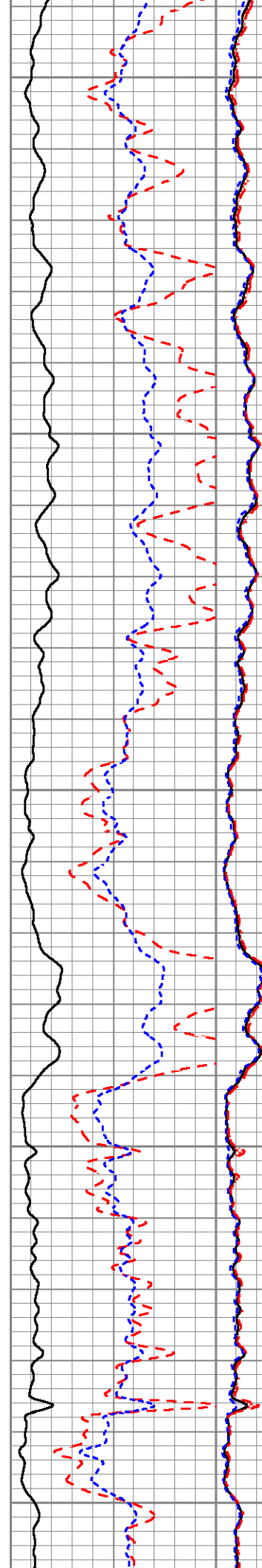
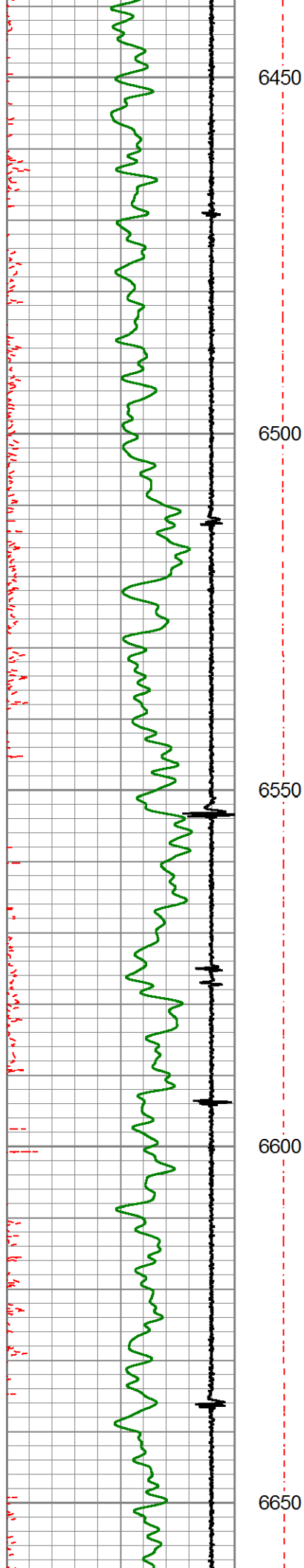




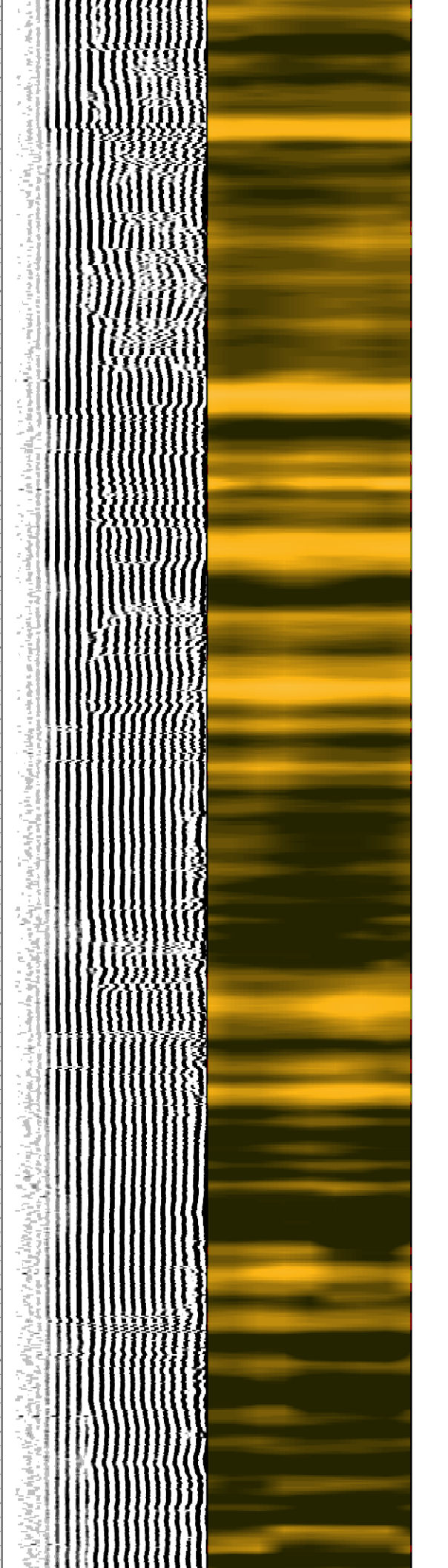
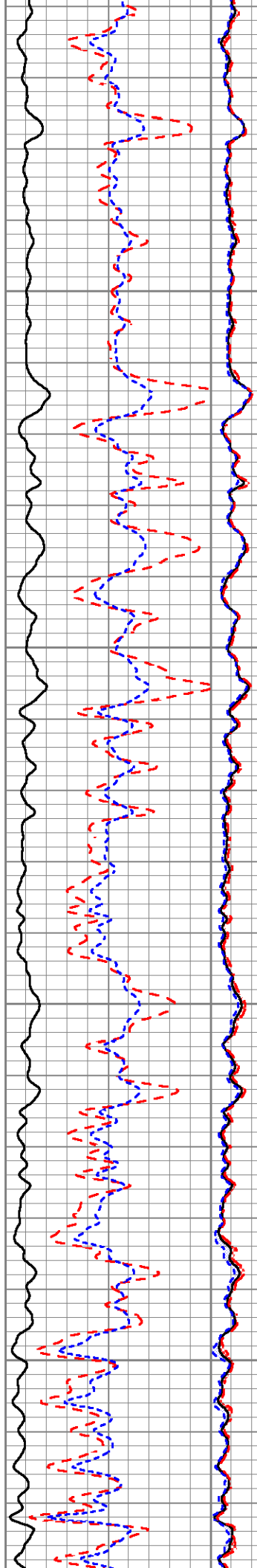
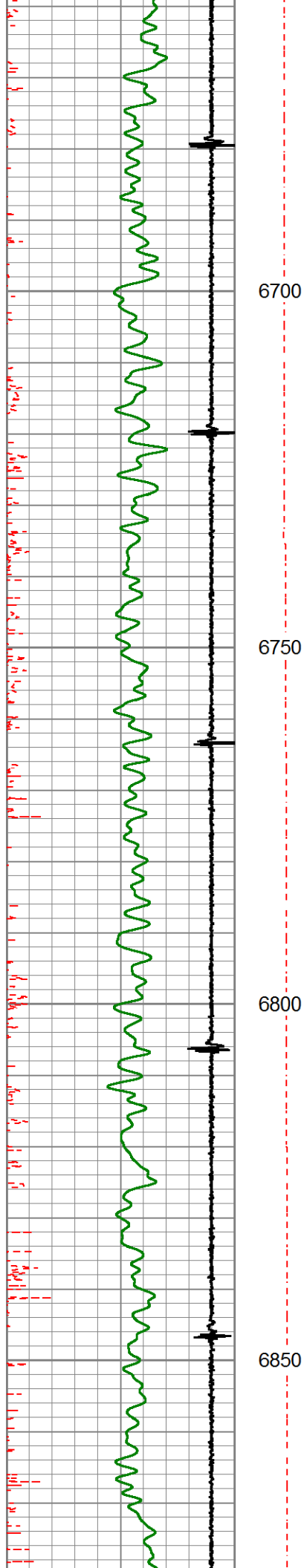
6000  
6050  
6100  
6150  
6200

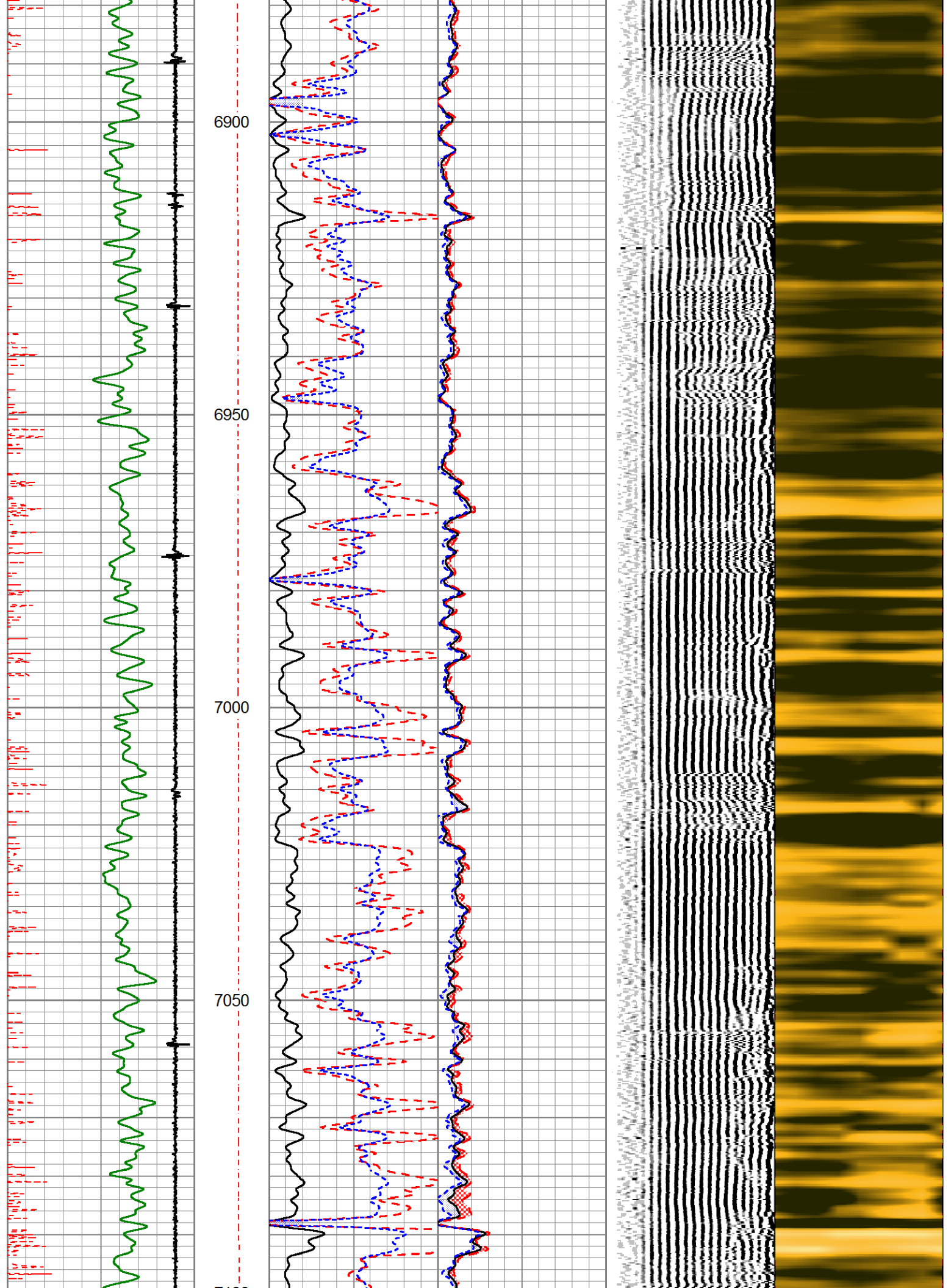


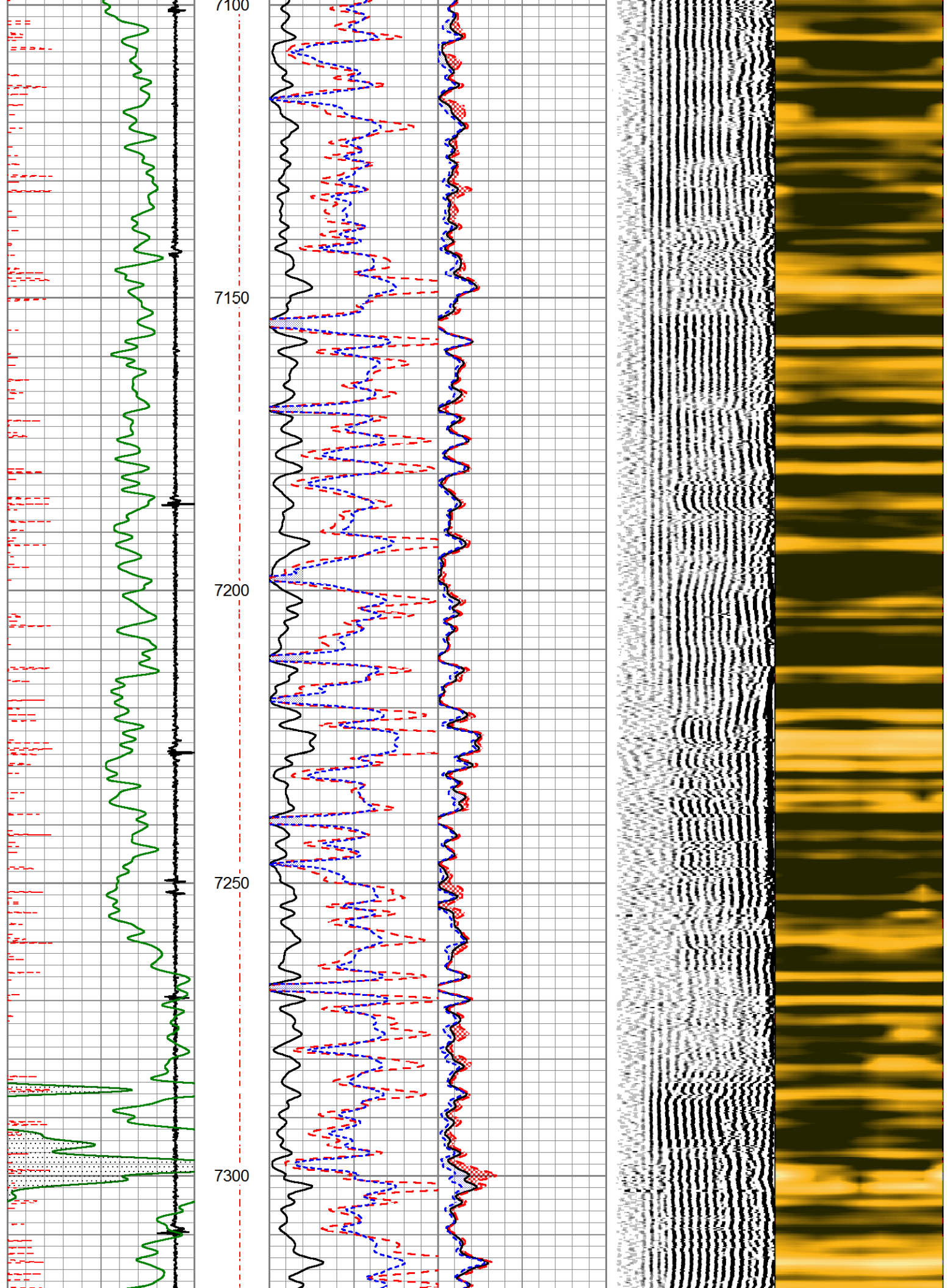




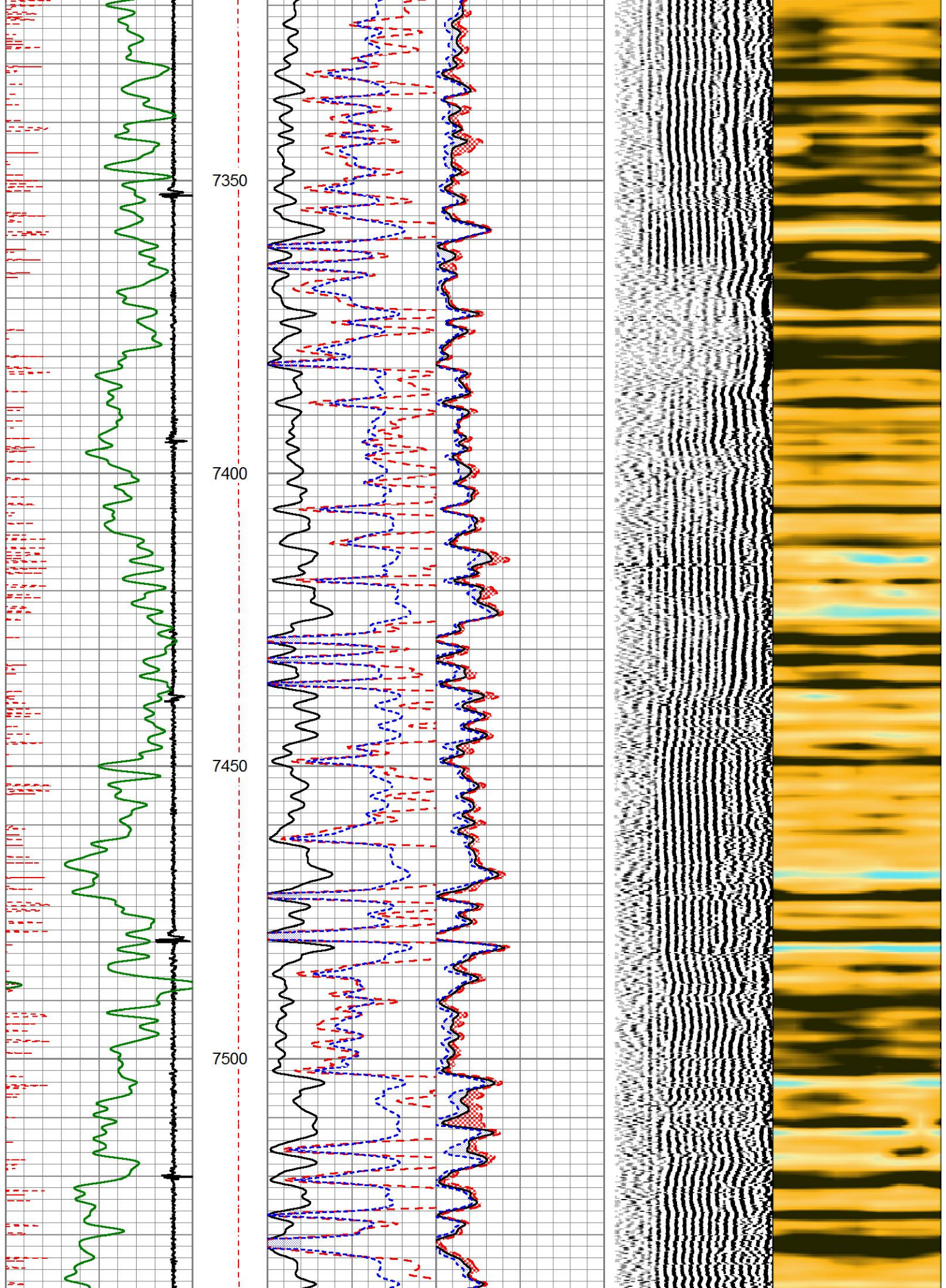




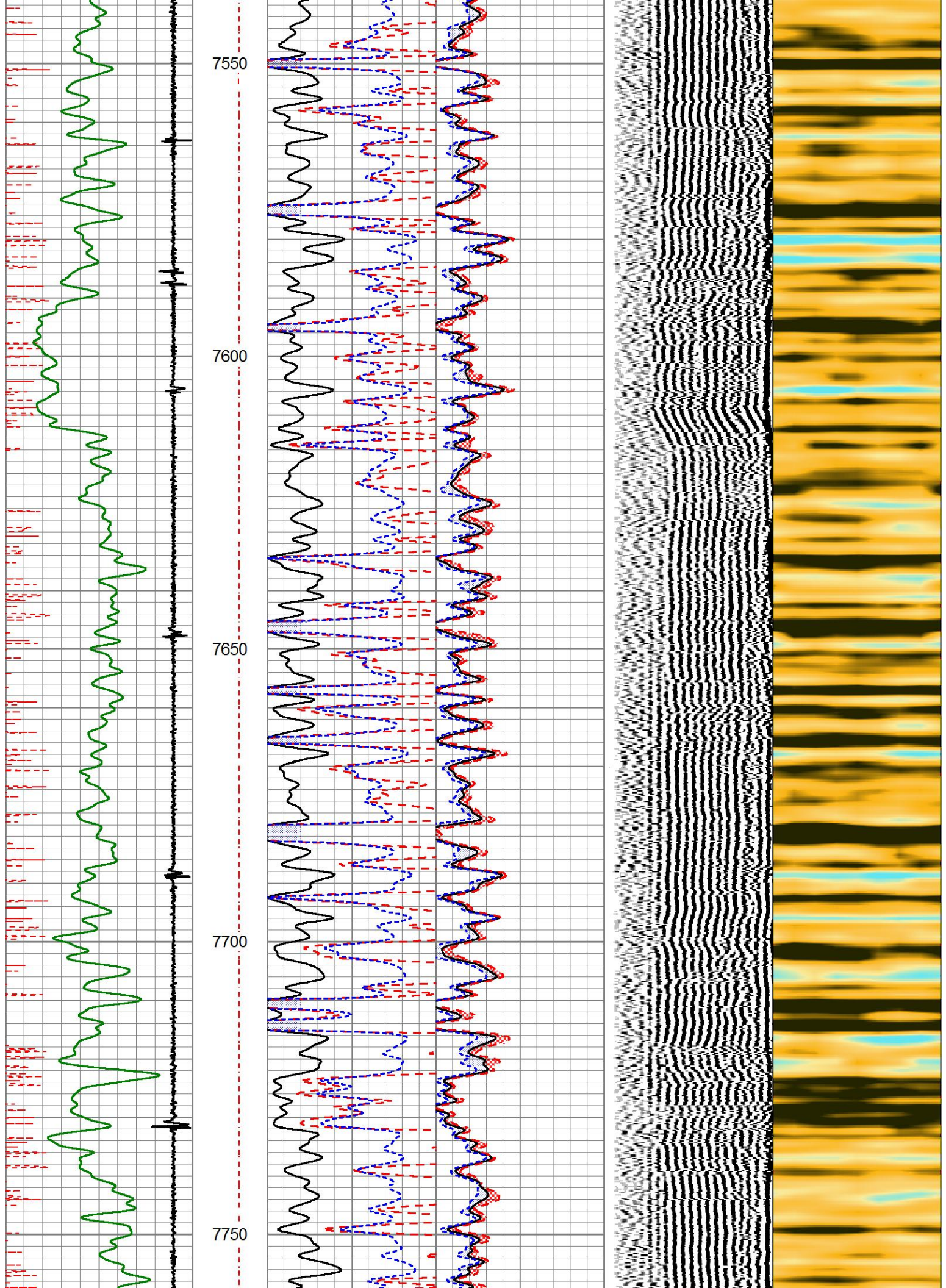



















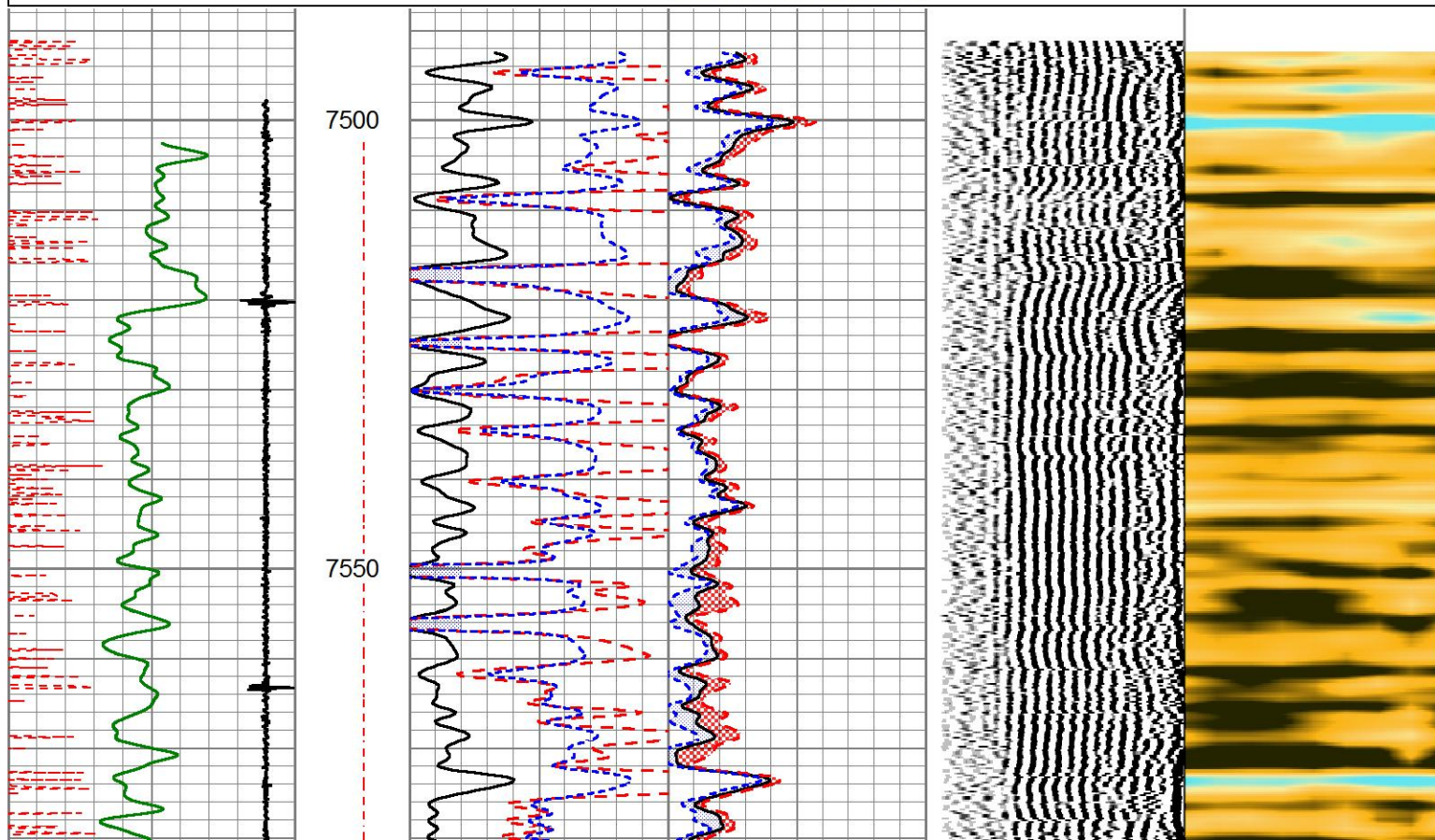
250 (usec)	150	0 (12000)	3' Amplified Amplitude X 5	0	150
-9 Collar Locator	1				
Gamma Ray		0 (mV)	20	Sector Amplitude Maximum	
0 (GAPI)	150	1 Bond Index	0	Sector Amplitude Minimum	
				0	150



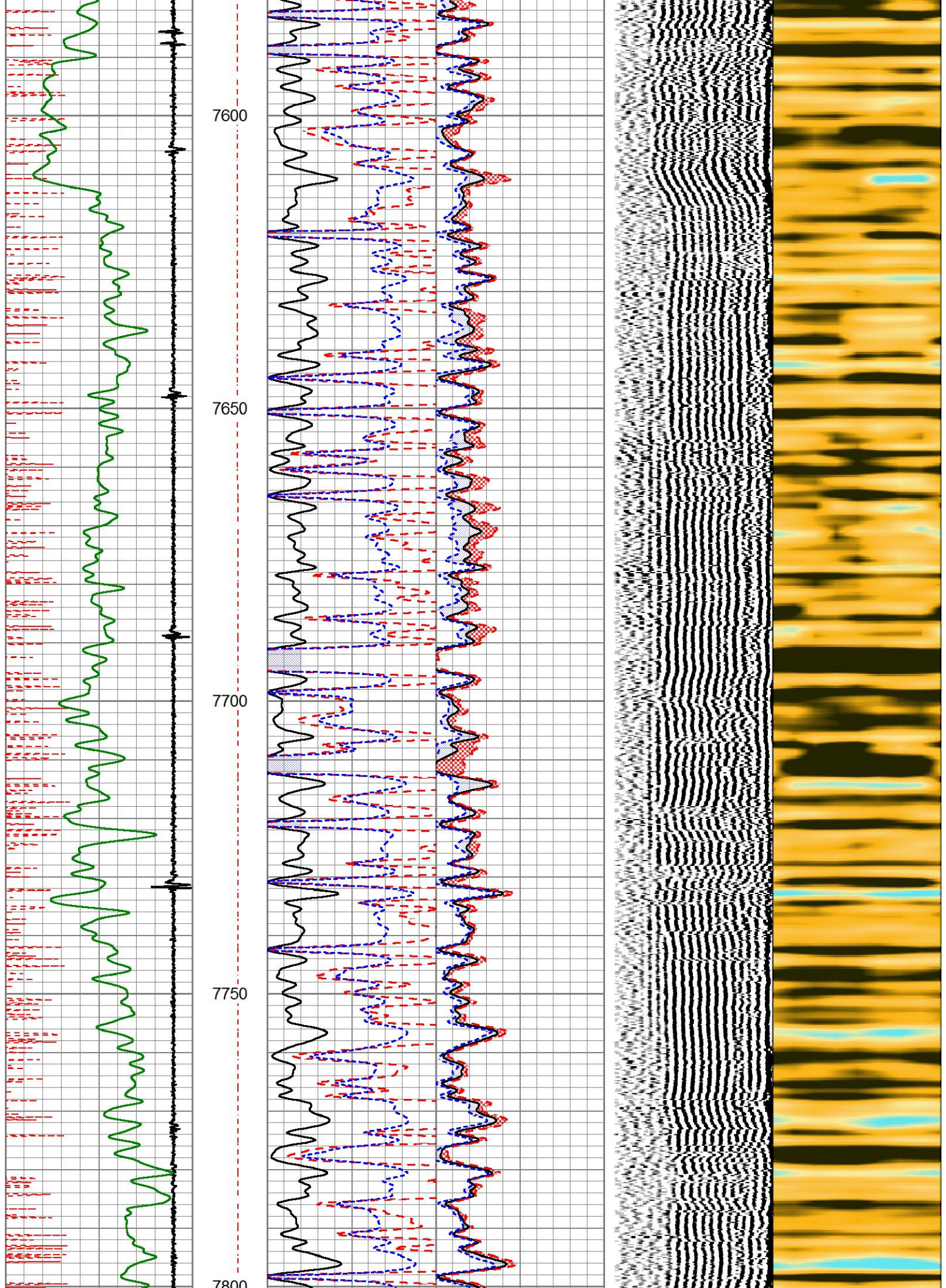
# REPEAT PASS

Database File	anadarko_heit, antone c unit 2_20170706.db
Dataset Pathname	pass4
Presentation Format	pinr_scbl
Dataset Creation	Thu Jul 06 15:04:17 2017
Charted by	Depth in Feet scaled 1:240

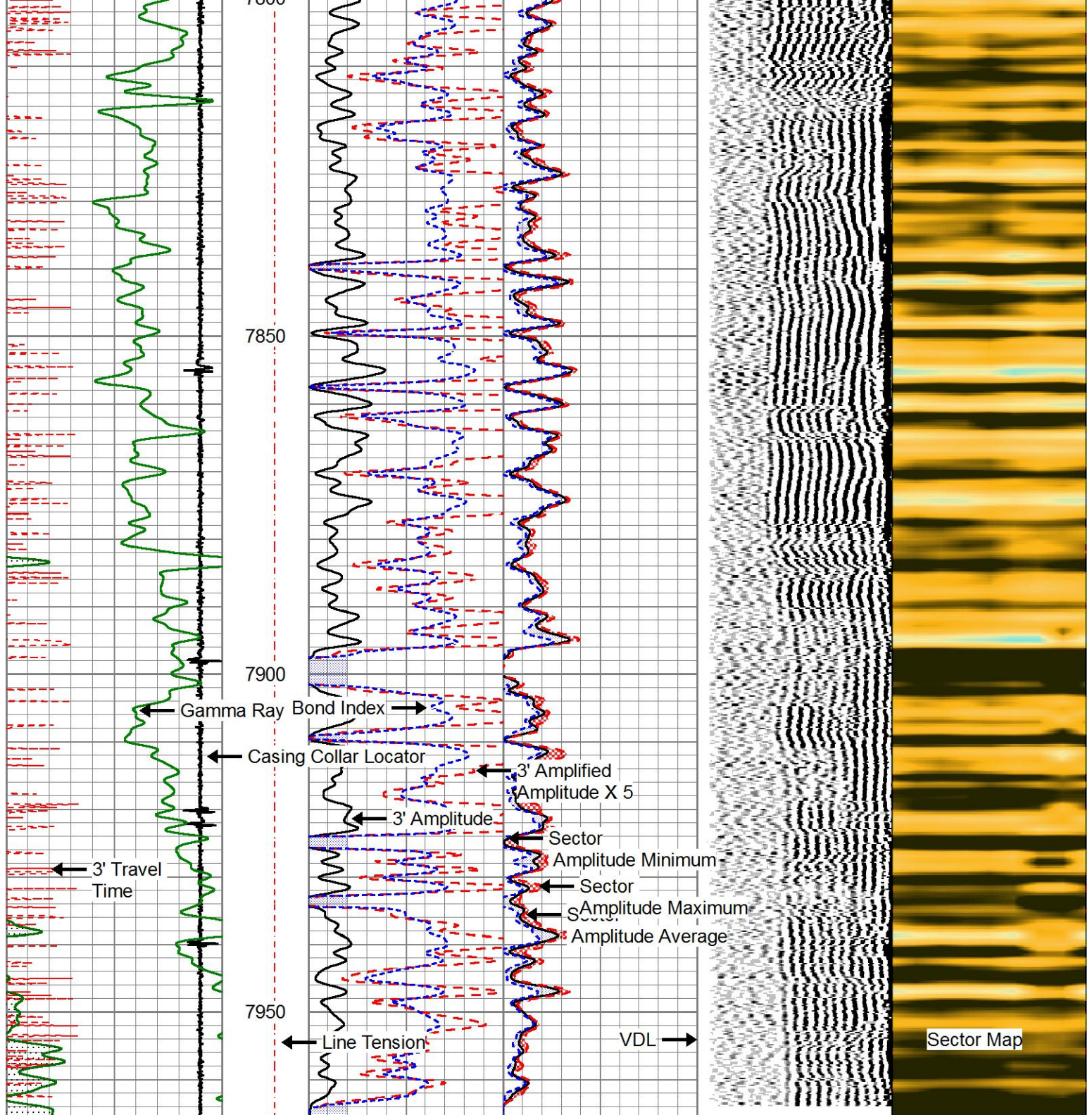
3' Travel Time	Line Tension	3' Amplitude (mV)	Sector Amplitude Average	200	VDL	1200	1	Sector Map	8
260 (usec)	0 (12000)	0	0				10		60
-9 Collar Locator	1	3' Amplified Amplitude X 5							
Gamma Ray		0 (mV)	20	Sector Amplitude Maximum					
0 (GAPI)	150	1 Bond Index	0	Sector Amplitude Minimum					
				0					











3' Travel Time			Line Tension	3' Amplitude (mV)		Sector Amplitude Average		200	VDL	1200	1	Sector Map	8
260	(usec)	160		0	100	0	150				10		60
Collar Locator			Gamma Ray	3' Amplified Amplitude X 5 (mV)		Sector Amplitude Maximum							
-9		1		0	20	0	150						
Bond Index			Casing Collar Locator	Bond Index		Sector Amplitude Minimum							
0	(GAPI)	150		1	0	0	150						



# Calibration Report

Database File      anadarko\_heit, antone c unit 2\_20170706.db  
 Dataset Pathname    pass6  
 Dataset Creation    Thu Jul 06 15:13:27 2017

## Gamma Ray Calibration Report

Serial Number:              FW1212-24  
 Tool Model:                275 Probe GR-CCL Corrosion  
 Performed:                Wed May 10 11:28:06 2017

Calibrator Value:            320.0                      GAPI

Background Reading:        14.0                        cps  
 Calibrator Reading:        1153.0                    cps

Sensitivity:                 0.6500                    GAPI/cps

## Segmented Cement Bond Log Calibration Report

Serial Number:              141166  
 Tool Model:                275 Probe w Temp New Mod

Calibration Casing Diameter:    5.500                    in  
 Calibration Depth:            2599.533                ft

Master Calibration, performed Thu Jul 06 14:34:54 2017:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	1.782	1.000	71.921	39.789	1.000
CAL	0.000	1.511				
5'	0.000	1.504	1.000	71.921	47.168	1.000
SUM						
S1	0.000	1.625	0.000	100.000	61.524	0.000
S2	0.000	1.751	0.000	100.000	57.114	0.000
S3	0.000	1.878	0.000	100.000	53.238	0.000
S4	0.000	1.944	0.000	100.000	51.436	0.000
S5	0.000	1.915	0.000	100.000	52.211	0.000
S6	0.000	1.807	0.000	100.000	55.342	0.000
S7	0.000	1.671	0.000	100.000	59.851	0.000
S8	0.000	1.591	0.000	100.000	62.865	0.000

## Temperature Calibration Report

Serial Number:              141166  
 Tool Model:                275 Probe w Temp New Mod  
 Performed:                Thu Jun 15 11:45:18 2017

Reference                      Reading

Low Reference:            35.00 degF            0.25 degF  
 High Reference:          210.00 degF          1.31 degF

Gain:                        0.79  
 Offset:                      6.00  
 Delta Spacing              1



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